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conserve as you serve

WITH THE *Empire* VICTORY *Meter*

CONSERVATION of critical materials for the war effort is the patriotic duty of every American. Conservation of water with the attendant savings in electric power, man hours, maintenance and repairs, is the goal of every water works man.

A majority of municipalities and water companies have long relied upon meters to properly apportion water charges and to guard against extravagant usage. But most water meters have been made largely of bronze—a vital material for essential wartime production needs. The recent limitation order by the War Production Board, of course, prohibits the manufacture of all bronze meters. The Pittsburgh-National research organization anticipated this order and many months ago started the development of satisfactory substitute materials. The resultant Empire Victory Meter requires only 30% of the bronze normally used in water meter construction. This meter is made with a completely rust-proofed cast iron case and is fitted with the Pittsburgh-National V-glass register box. There are only three interior bronze castings required for the vital working mechanism. Here is a meter that enables you to conserve as you serve. It will give thoroughly accurate and dependable measurement, both for the duration and for many years to come.

A FULLY PROTECTED IRON CASE WATER METER WITH V-GLASS REGISTER BOX

Empire VICTORY *Meter Features*

Cast Iron Case With Triple Protection

1. All casting surfaces "resistin" coated.
2. All machined surfaces chemically treated.
3. Lead alloy liners at all contact points between casing and measuring chamber.

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A single piece, strong, molded glass unit which fits snugly over the register and is retained against a fibre gasket. Serves as both register box and lid; protects register against dust and moisture; will withstand considerable abuse.

Empire Oscillating Piston Design

Unexcelled accuracy and long operating life provided by the time-tested Empire balanced oscillating piston principle of measurement. Has four wheel oil enclosed intermediate; snap-joint measuring chamber, no interior screws. A simple and compact mechanism with a record of 59 years of successful performance.

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Buy War Bonds and Stamps. Help win the war for FREEDOM.

Municipal Priorities for FWA Projects

By Brigadier General Philip B. Fleming, U. S. Army
Federal Works Administrator

CRITERIA for determination of whether a proposed project is eligible for inclusion in the Federal Works Agency's war public works program have become more and more rigid. This has been emphasized in a number of administrative actions, among them the statement of basic construction policy last winter, the listing of 200 critical materials of which use is barred or severely restricted, orders for simplification of design, and the creation of Vital Area Boards made up of representatives of FWA, the armed services, and other interested agencies, federal and local. The extent to which we are adjusting the war public works program to the realities of the situation is further emphasized by an agreement which the FWA and the War Production Board entered into on July 3.

The effect of this agreement is to formalize and amplify the repeatedly stated policy of the FWA to recommend for Presidential approval only those projects which are indispensable to prosecution of the war. It specifically lists seven conditions which must be met before FWA will consider a proposed war public works project or apply to WPB for a priorities certificate or allocation of material. These conditions, in the words of the agreement, are:

(a) It is essential to the war effort.

(b) Postponement of construction would be detrimental to the war effort.

(c) It is not practical to rent or convert existing facilities for the purpose.

(d) The construction will not result in duplication or unnecessary expansion of existing plants or facilities now under construction or about to be constructed.

(e) All possible economies have been made in the project, resulting in deletion of all non-essential items and parts.

(f) The projects have been designed of the simplest type, just sufficient to meet minimum requirements.

(g) Sufficient labor, public utilities, transportation, raw materials, equipment, and the like are available to build and operate the plant. The manufactured product can be used at once or stored until needed.

Besides the usual certifications of necessity from the Federal Security Agency, which form the basis for a Presidential finding of need, it must be clearly shown that the final need arises from the requirements of the Army, Navy, Maritime Commission, Lend-Lease Agency, or WPB. This must be supported by a resolution of

the Vital Area Board of the area concerned, or by recommendation from the local command of reservations, posts, bases, shipyards, or war production industries, or projects of the National Housing Agency.

The agreement provides that projects be considered in the following order of importance:

(a) Water supply
(b) Power
(c) Fire-fighting equipment
(d) Sewerage
(e) Access roads and bridges
(f) Hospitals, health centers, schools, and recreation facilities in the order to be determined in each area by FSA and FWA on the basis of war need in that area

Water Supply and Fire-Fighting

The agreement states specific limitations upon projects in each group. In general, these limitations accord with policies already adopted by FWA. In the case of water supply projects, for instance, capacity of sources and distribution facilities to be developed is based on actual population density, the increase of population that can be definitely forecast, and the demonstrated needs of military or naval establishments, shipyards, and war industries in the area. The agreement adds: "Demands computed on long-range population or plant increases not presently fully determinate shall be discontinued and capacities figured on determinate increases only." The Public Health Service will pass on the adequacy of the design for protection of public health and safety. Designs must avoid, to the greatest possible extent, use of critical materials.

During the war, conventional fire-fighting equipment will not be supplied. Applications will, however, be received for an adapted standard 1½ ton, four-wheel truck equipped with a 500-gpm pumping unit, hose, accessory equipment, and tools. Specialized equipment such as water towers, aerial ladder trucks, and rescue units is definitely out. Requests for fire-fighting equipment are reviewed by a joint committee on which are represented the Underwriters Division of the Army, the Plant Protective Division of the Navy, and FWA. No applications for marine equipment should be submitted to FWA.

Sewers and Sewage Treatment

The capacity of sewerage grids, mains, interceptors, and outfalls will be limited to the immediate determinate increase in sewage volume computed on the same basis as water supply facilities, unless a long-range joint area program or municipal program already exists. In that case, capacities may equal those required by the master plan, provided that this will not cause any appreciable increase (say 10 per cent) in the use of critical materials.

Proposals for construction of sewage-disposal plants will not be entertained unless it is conclusively shown that the pollution resulting from sewer construction will cause an unsafe bacterial load in the public water supply. In that event, the decision as to whether to build a disposal plant or to install additional water purification facilities will depend upon which action would require less critical material consonant with the greatest degree of public health and safety.

Incinerators, Roads, Bridges

No proposals for incinerators or other mechanical garbage-disposal plants will be considered unless it can be clearly shown that the sanitary fill method of garbage disposal is inadequate owing to the need for guarding against the danger of disease carried by rodents or other pest carriers. The United States Public Health Service and the Federal Works Agency will make such determinations.

(Concluded on page 73)

Clear the Lines for the War

Before you make a Long Distance telephone call today, ask yourself these questions:

1. Is it necessary?
2. Will it interfere with war calls?

The weight of war on the telephone lines is heavier every day. We can't build the new lines to carry it because sufficient materials aren't available. We've got to make the most of the service we now have.

Please give a clear track to the war effort by confining your Long Distance calls to those that are really necessary.

WAR CALLS COME FIRST

BELL TELEPHONE SYSTEM

Our Municipal Notebook

Does a Radio Car Need Two Officers?

To the Editor of THE AMERICAN CITY:

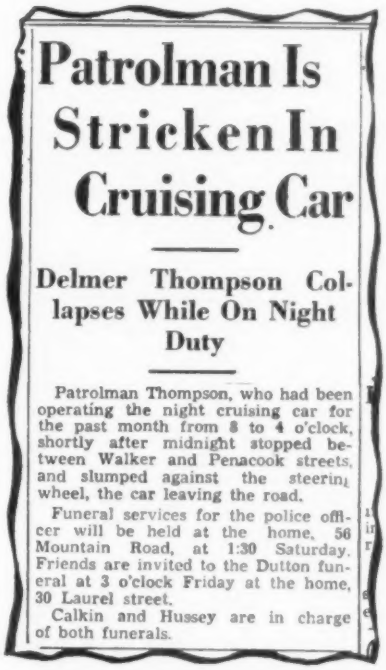
Your June issue asked comments on whether a police radio car needs two officers. I send you a copy of the St. Louis Police Survey published this year which says on page 106:

In addition to the 45 district scout cars, each with a crew of two men, normally operating at all times throughout the city, there are 12 district cars carrying two-man crews in plain clothes, 18 detective cruisers with three-man crews, and 12 headquarters cars with two- or three-man crews under the command of the chief of detectives—not to mention an average of 35 solo motorcycles attached to the traffic division and operating on a city-wide basis from 7 A. M. to 11 P. M. . . . It is recommended that the two-man crews in patrol cars during the first platoon (7 A. M.-3 P. M.) be reduced to one man, and that one-man crews for two or even all platoons in the quiet residential districts be given a thorough trial. The saving in manpower by the first change outlined above, with necessary allowances for replacements, will be approximately 48 men thereafter available for other police assignment.

The police of about one-half of all American cities operate their patrol cars with both one-man and two-man crews, including Baltimore, Cincinnati, Cleveland, Indianapolis, Oakland, Portland (Ore.), Rochester, Syracuse, and Albany. In addition to this list, San Francisco, Providence, and 17 other cities operate one-man patrol cars exclusively. St. Louis, with its large number of radio patrol cars, should take advantage of the savings in manpower made available by its extensive motorized facilities.

For more details on this point and some interesting reasoning, get in touch with Bruce Smith of the Institute of Public Administration in New York City.

CHARLTON F. CHUTE,
Director, Governmental Research Institute, St. Louis.



Patrolman Is Stricken In Cruising Car

Delmer Thompson Collapses While On Night Duty

Patrolman Thompson, who had been operating the night cruising car for the past month from 8 to 4 o'clock, shortly after midnight stopped between Walker and Penacook streets, and slumped against the steering wheel, the car leaving the road.

Funeral services for the police officer will be held at the home, 56 Mountain Road, at 1:30 Saturday. Friends are invited to the Dutton funeral at 3 o'clock Friday at the home, 30 Laurel street.

Calkin and Hussey are in charge of both funerals.

A reason for more than one man on a radio car at night

Fire Ordinances Adopted

ELEVEN Florida cities and Duncan, Okla., recently adopted fire-prevention ordinances, built on the basic ordinance developed by the National Board of Fire Underwriters, and from whom a copy may be obtained. This makes a total of 24 municipalities which have enacted such legislation within the last year, says W. E. Mallalieu, General Manager of the National Board, and Harold N. Mann, Chairman of the Fire Prevention Committee of the National Association of Insurance Agents.

Conserving Vehicles

THE purpose of the nation-wide war transportation program is (1) to prolong the life of all transportation facilities now in use and (2) to increase the efficiency of mass transportation facilities. These objectives are to be accomplished through (1) systematic staggering of office, factory, and school hours; (2) group riding private automobiles on a planned, neighborhood-by-neighborhood basis; and (3) improved regulation of local traffic.

JOSEPH B. EASTMAN,
Director, Office of Defense Transportation

Self-Insurance Profitable without Fires

A QUARTER century ago the city of Elizabeth, N. J., started to get a self-fire insurance fund with an appropriation of $10,000 in 1916, another $10,000 in 1917, and $5,000 in 1918. Then mounting city government expenses and the voice of the local insurance agents rising above the normal noise level brought a cessation in further appropriations. It was hoped that with luck as to losses, the fund would grow of itself.

This hope was confirmed. The Insurance Fund Commission carries about 20 per cent of the $7,806,630 in fire insurance on Elizabeth city properties, assuring the safer risks. Losses borne by the Fund have been as follows: 1917, $184; 1918, $83; 1927, $61; 1935, $199; 1940, $73; 1942, $3,776. That 1942 loss was one of those events that nobody could forsee and the reason why cities carry insurance. One of the pupils of Thomas Jefferson High School disliked the principal, so set fire to the school to put him out of a job. The loss amounted to $23,565 of which the city fund stood $3,776.

The total earnings of the Fund have averaged $3,200 per year. Premiums on the 500 policies amounted to $10,202 in 1941, of which $8,965 was paid to the local agents and $1,237 was assumed by the Fund. The additional "profit" is from interest on investments, chiefly U. S. Government bonds. The Fund serves a useful purpose in centralizing the placing of city-property insurance. Instead of each city department placing its fire insurance, the Fund distributes the insurance among the local agents equitably. The Fund has grown to $101,880. The Insurance Commissioners are Dr. Otto Wagner, Dr. George T. Banker, and City Comptroller P. F. McCann; J. W. Fuhrmann, Chief Clerk, Comptroller's Office, is secretary.

Use Stream Not Spray on Bomb

A JET of water and not a spray should be used on incendiary bombs, say instructions issued on July 24 by James M. Landis, Director of the Office of Civilian Defense. The changed technique is the outcome of experiments with actual magnesium bombs. "The jet method," said Mr. Landis, "is much the quicker and more effective." Reduced to essentials, the new instructions follow:

1. Bring your fire fighting equipment to the scene as soon as the bomb strikes
2. Shoot a jet of water directly at the bomb without delay to put it out of action quickly
3. Then use the jet quickly to quench fragments and the remains of the bomb and any fires it might have started
4. Be absolutely sure all the fire is out before you leave the scene
5. Use a coarse spray only where scattering of metal must be avoided
6. Use sand only if a bomb falls where it is not likely to start a fire or if water is not available

In WAR..as in PEACE..
ELEVATED WATER STORAGE TANKS
are helping to:
★ Guard Public Health
★ Provide Emergency Service in Case of Main Power Failure
★ Insure Greater Fire Protection
★ Conserve Electricity
Illustrated is the attractive 1,000,000-gallon Horton radial-cone bottom tank installed recently at Beaumont, Texas.

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During August we hope you will remember to mention THE AMERICAN CITY.

Water-Works Operation

Is Your Water-Works Plant Prepared?

TO CLARIFY the requirements of water works in civilian defense work, Col. R. E. Tarbett, Senior Sanitary Engineer, U. S. Bureau of Public Health Service, has prepared a series of questions dealing with this subject. Those that relate directly to water-works operations are as follows:

1. Have you developed your own communication system so that it will function during a raid? Remember regular telephone service may be curtailed or entirely off.

2. Have you trained your own office and field force for emergency work? Office force, meter readers, and the like can be used for gatemen and messengers if not for the more laborious work. Don't forget that this requires planning and training.

3. Have you placed any curb on your employees engaging in other activities in the defense program? All water-works employees should be trained for the emergency work of the department and not as air wardens and the like.

4. Are your maps, gate valve locations, and other essential data up to date and ready for use? You may need them badly at any time.

5. Have you checked your gate valves? Do you know that they will operate?

6. Have you scattered your material and equipment at various locations? Equipment in a central yard may be bottled up or destroyed by a single bomb.

7. Have you established stations in various parts of the city from which gate crews and minor repair squads will operate? Gate crews need to be at the incident as quickly as the firemen.

8. Have you arranged for chlorination squads? All mains must be chlorinated before being returned to service. Auxiliary supplies that may have to be used must be chlorinated before entering the system.

9. Have you made provisions for supplying water to certain sections for domestic purposes during periods when water service is off? Use of water carts or temporary water lines may be necessary.

10. Have you cooperated with the health department in your planning? Don't forget that it is responsible for the health of the people.

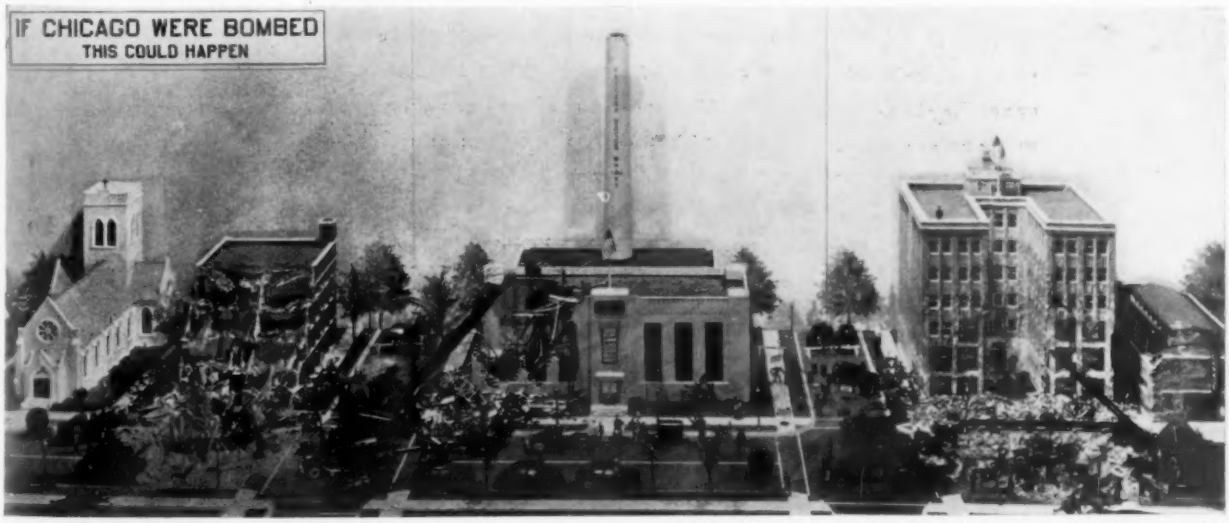
11. Have you carried on command post exercises? If not, how do you know that your organization will function in an emergency?

12. Have you arranged for increased chlorine dosages and more thorough laboratory examination of water samples from the distribution system as a regular procedure and for a much greater increase following an air raid? London health authorities have done this very successfully. London health authorities have been able, by this method, to actually maintain a superior water bacteriologically than was the case before the war began.

Water Works Responsible for Continuous Supply

THE Federal Government holds that all facilities, including water works, both municipally and privately owned, are responsible for maintaining a continuous service and for providing all necessary protective measures within their power. This statement was emphasized by Senior Sanitary Engineer, R. E. Tarbett of the Public Health Service at the meeting of the New York State Zone Coordinators of Water Service in Albany, New York, on May 12, 1942. Protective measures will include proper guarding of various strategic points in the system.

The determination as to facilities and where military guards may be placed rests entirely with the Defense or the Corps Area Commander.



This exhibit was prepared by the Chicago Water Works Department and shown at the A.W.W.A. Conference held July 21-25 in Chicago. It reproduces a conception of what would happen if bombs were to fall in the vicinity of certain water-works pumping stations in Chicago. Note on the right that a temporary by-pass has been placed to supply water where a bomb falling in the street has destroyed a main. Various civilian defense crews are working together with a utility repair crew to restore essential civilian activities and relieve those people living in these damaged areas

"TRUCK HIT A MATHEWS HYDRANT? WE'LL HAVE IT FIXED IN HALF AN HOUR"

The greatest single convenience in hydrant maintenance is the Mathews design which combines all operating parts into one interchangeable barrel.

Whether a Mathews Hydrant is traffic-smashed or needs new nozzles, whether it is to be raised or lowered, whether you want to renew its valve-seat, main valve leather, or drain valve, just unscrew the barrel and lift it out through the loose protection case. Replace it with a spare barrel, and carry the old one back to the shop for convenient service. Just like a spare tire.

A short-handed, war-busy water department is mighty lucky to have Mathews Fire Hydrants. So is the community it protects.

MATHEWS HYDRANTS

400 CHESTNUT STREET, PHILADELPHIA, PA.

ESTABLISHED IN 1803

Made by R.D. WOOD Company

MANUFACTURERS OF SAND SPUN PIPE (CENTRIFUGALLY CAST IN SAND MOLDS) AND R. D. WOOD GATE VALVES

Street Maintenance

Waterford, Conn., is using this 2-ton Dodge truck in municipal service to haul sand and gravel for street work in summer, also wood and food to families on relief, and in winter a plow is attached for clearing snow from streets and highways. It is equipped with a 3-cubic yard dump body, 34 x 7 oversize tires, and an overdrive transmission

Cutting the Cost of Street Sweeping

ABOUT five times as much street sweeping is being done by Princeton, N. J., through the use of a mechanical sweeper, as by the old hand broom method, states I. Russell Riker, engineer and director, Department of Engineering.

Costs formerly approximated $7.00 per curb mile, and about 800 curb miles were cleaned each year. Since April 1940, when a small mechanical sweeper was purchased, costs have dropped to $1.60 per curb mile including labor, operation, and depreciation of the sweeper. Approximately 4,000 curb miles are now cleaned annually, according to Mr. Riker's report.

Extensive Service by Kewaunee Dept.

THE Street Department at Kewaunee, Wisc., does a great deal more for its municipality than merely constructing and maintaining city streets. This department also provides labor and machinery for the following: garbage removal, sewer maintenance work, the light and water department, and also park maintenance.

The largest individual project undertaken by the department through the year was the improvement of the lake front on municipal and leased property. The work included the construction of a sea wall and filling the entire improved area. For several years the department has increased its efficiency by maintaining in operation four trucks including a pick-up service truck, a Fordson tractor and cement mixer, in addition to the other usual tools and minor equipment.

The department operates under the dirction of the Street Supt., Lee E. Jirtle, and a Municipal Council on streets, sidewalks, and parks.

Pittsfield, Mass., Notes Street-Maintenance Costs

PROBABLY the most extensive work performed by the Public Works Department of Pittsfield, Mass., was that of its street maintenance. This phase of the work employed 40 men and spent roughly $104,000 in 1941. This, however, resulted in a year of substantial accomplishment. All the city streets not permanently surfaced were treated with a tar binder, sanded, and bladed. The Department surfaced 675,000 sq. yds. of street using 232,843 gallons of tar and 5,882 tons of sand at a cost of 3 cents per sq. yd.

Use of the new bituminous mixing plant cut the cost of cold patching from $11 per cu. yd. when mixed by hand to $4.50 per cu. yd. Despite the sharp decrease in snow fall, the Department was still faced with the clearing of 4,413 miles of streets at a cost of $1.48 per mile. It removed 18,500 cu. yds. of snow at 23 cents per cu. yd.; 744 miles of streets were cleaned with all permanently surfaced streets gone over once a week.

During the year 660 new trees were planted; 113 old unsightly and unsafe trees were cut down; and 6,115 trees were disinfected with the new tree-spraying equipment at a cost of 19 cents per tree. Nine streets were accepted by the City Council, adding 1 1/10 miles to the care of the city.

Seal-Coating Streets in St. Paul

INSTITUTING a program to rejuvenate old asphalt pavements in St. Paul, the city officials have adopted a system of seal coating. This is according to a statement issued by Milton Rosen, Commissioner of Public Works.

This work consists of applying cutback asphalt and retreading this with a layer of trap rock chips. Department officials report that this treatment eliminates a patched appearance and leaves a uniform surface that resembles a new pavement. It is also non-skid.

The cost of this work, according to Milton Rosen, Commissioner of Public Works, is about five cents per square yard.

Arkansas Court Defines Legitimate Street Costs

IN a recent case against the city of Little Rock, Ark., the Pulaski County Chancery Court clarified some questions regarding expenses other than the direct building, repair, and maintenance of streets and bridges that could be met legitimately from the city auto license tax, street paving refunds, and state gasoline tax.

This Court held that the following were legitimate and did not constitute diversion:

Expenses of traffic policemen engaged in traffic control

Maintenance of traffic laws

A portion of street lighting, if the portion is small enough to indicate that lighting is needed for purposes other than for facilitating street traffic

Administrative or executive expenses which must be borne by the municipality as a result of the street department

The pay of city prisoners who work out fines

Costs of street cleaning.

The Finest

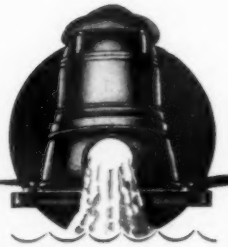
THAT SKILL AND EXPERIENCE CAN BUILD

To our Railroads, America pays thankful tribute! They are doing a magnificent job in speeding troop and war material movement. Since pioneer days, our railroads have led the world in quality, efficiency and capacity. They are the finest that skill and experience can build.

But for these railroads—the shops that build locomotives, cars, rails and equipment, there had to be an abundance of water. With amazingly few exceptions, it was Layne who designed and built their Well Water Systems. Layne Wells and Pumps are famed for their high efficiency, long life and low upkeep cost. Records show that they out-last, out-produce and out-perform any other water system made.

Layne Well Water Systems, like our great American railroads are doing a magnificent job. They are standing up to unmerciful treatment—day after day and month after month of continuous full capacity operation. Not one has failed due to weakness of construction or quality of materials used. It is in this tragic period of emergency that Layne reliability, skillful design and rugged construction is most appreciated. Thousands of Layne Well Water Systems are serving railroads, factories, municipalities, irrigation projects and both the Army and Navy. For late catalogs, bulletins, folders, etc., address,

LAYNE & BOWLER, INC.
Memphis, Tenn.



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The above companies are affiliates of Layne & Bowler, Inc., Memphis, Tenn.

LAYNE PUMPS & WELL WATER SYSTEMS

● IF YOU NEED MORE WATER—Layne will provide competent engineers who will cooperate in checking water bearing formations, size of wells necessary and the type of pumps that will operate at the lowest cost per million gallons. No obligation.

WORLD'S LARGEST WATER DEVELOPERS

When you write for that catalog, kindly mention THE AMERICAN CITY.

Sewerage and Refuse Disposal

Schenectady's "Streamlined" Waste-Collection Fleet

As part of an advancing program for modernized waste-collection equipment at Schenectady, the city recently approved the purchase of seven new cab-over-engine collection trucks. All have solid sides and permanently mounted tarpaulins. They will replace unserviceable and antiquated equipment and will be a definite improvement because of their greater maneauverability in street traffic and better ease of handling. Timely action on the part of the city council insured their purchase before the wartime freezing order.

Sanitary department officials note that garbage and waste collection is one of the most reliable population barometers for this city. Added population influx due to war work has imposed an increasing burden on sanitary facilities. However, despite this, regular schedules were maintained and little difficulty was encountered. The garbage collection fleet traveled 225,000 truck miles, and made 968,000 service stops at a unit weekly service cost of 10.5 cents.

Charles J. Leonard is Supervisor of Waste Collection and Thomas H. Welch is Supervisor of Waste Disposal. Charles A. Harrell is City Manager.

City Engineer Plans for Sewerage Rehabilitation

LONG-RANGE plans for the rehabilitation of the sewer system at Somerville, Mass., are now being drawn by Thomas E. Hegarty, City Engineer. Pointing out the fact that several of the older sewers have collapsed during the last year, and expressing it as his opinion that such breakdowns will occur more frequently, Mr. Hegarty is laying plans toward the reconstruction particularly of the oldest and largest trunk sewers and storm drains.

Plans also are included for the construction of separate sewers in various sections of the city. The present lines, he states, have been so overloaded that their condition now becomes almost an intolerable nuisance. This has resulted in overcharged sewers and flooded cellars in many districts.

Fertilizer from Mixture of Sludge and Refuse

THE war has resulted in the refinement in England of the use of sludge as a soil conditioner. In an effort to get the utmost value out of all municipal refuse, engineers have found that separating, pulverizing, and then mixing refuse with sludge is adding to its fertilizing qualities.

According to a recent report carried in the *Municipal Journal and Local Government Administrator*, published in London, complete utilization of both sewage sludge and municipal refuse is being effected in many places. This involves rather thorough processing of the refuse. England's practice is to first remove the "salvage," such as paper, scrap iron, bones, from the material, screen the residue to remove the inorganic ash, pulverize the resulting material which is mainly organic in nature, and finally to add sludge to this material and store the combination for a period to allow it to "mature." This work has been chiefly carried on by C. C. J. Bullough who is identified with the Maidenhead treatment plant.

The report states that the annual cost to the borough for the disposal of refuse and sludge simultaneously is substantially less than the average cost of disposal of the refuse alone. Cinders reclaimed still have a limited amount of calorific value and are used to generate steam at the sewage-treatment plant.

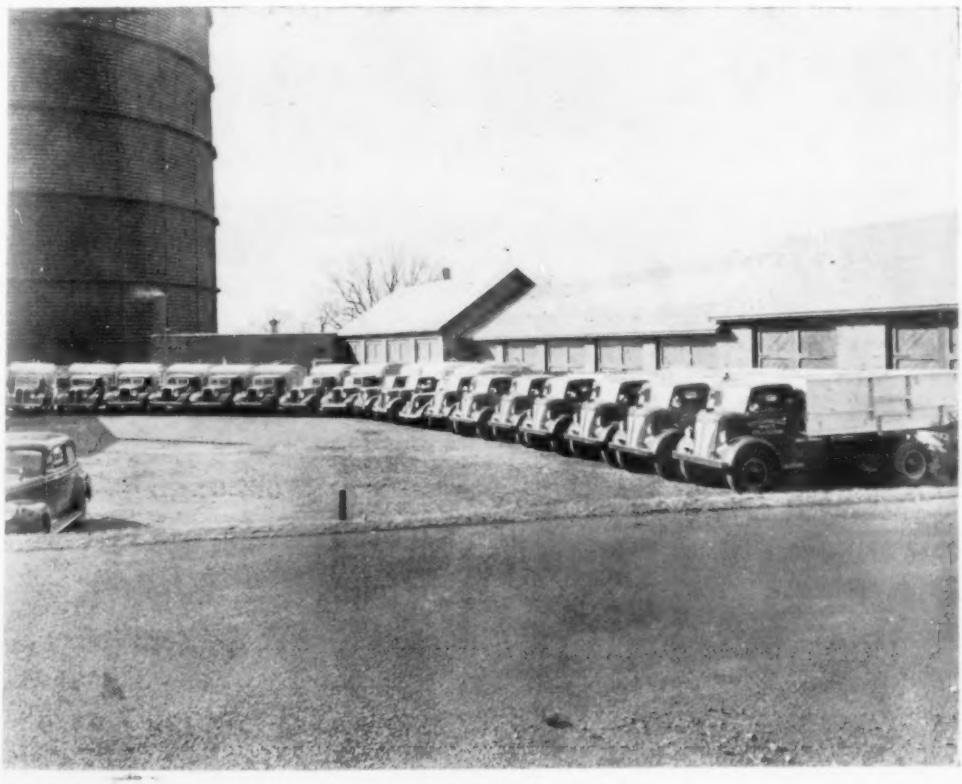

ILLUSTRATION FROM SCHENECTADY'S ANNUAL REPORT "YOUR CITY GOVERNMENT"

A view of Schenectady's "streamlined" waste collection fleet. This consists chiefly of Gar Wood load packer bodies mounted on Federal motor truck chassis. Some of these are designed for the collection of mixed refuse for the municipal incinerator. Others are used for the collection of incombustible material which is delivered to the sanitary fill-areas. Each of these trucks carries the slogan "For Sanitation's Sake"

AIR RAID SHELTER

. . for your water supply

Natural enemy target would be the water supply line of a sighted community. Against the threat of air attack or sabotage—your safest shelter lies in steel-reinforced concrete.

Lock Joint Pipe can take it! Its underlying strength rests in the solid toughness of its dense concrete walls—in its cylindrical steel skeleton ribbed with bars of steel—in the flexibility of its self-caulking joints. Each unit of a Lock Joint Pressure line is a thick-walled bulwark of defense against terrific vibration and shock. Nor are those sub-surface enemies, corrosion and tuberculation, able to successfully attack the hydraulic efficiency of a Lock Joint supply line. Never—in the 37 years of our history, in all the lengths of our pipe lying throughout the world—has there been a failure. Construction and design make Lock Joint Pipe your safest, surest investment today—yet Lock Joint Pipe uses less of those essential materials so necessary to our War effort. Whether your project is large or small, play safe with Lock Joint Reinforced Concrete Pressure Pipe. Your 'phone call, telegram, cable or letter to any of our offices will bring an immediate response.

LOCK JOINT PIPE COMPANY

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Denver, Colo. • Chicago, Ill. • Kenilworth, N. J. • Kansas City, Mo.
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SCOPE OF SERVICES

Lock Joint Pipe Company specializes in the manufacture and installation of Reinforced Concrete Pressure Pipe for Water Supply Mains as well as Concrete Pipe of all types for Sanitary Sewers, Storm Drains, Culverts and Subaqueous lines.

Buy War Bonds and Stamps. Help win the war for FREEDOM.

Surprise Blackout in Utica, N.Y.

Police Control and Fire-Fighting Equipment

ON June 25 at 10 P.M., Utica's citizens and visitors suddenly found all their normal activities suspended when the Sterling sirens sang for five minutes and lights blinked out all over the city. It was the first surprise blackout in the Utica Warning Area comprising most of Oneida, Herkimer, and Madison counties. Public Safety Commissioner J. N. Sullivan said that with possibly three exceptions in the downtown area blacking out was prompt and thorough.

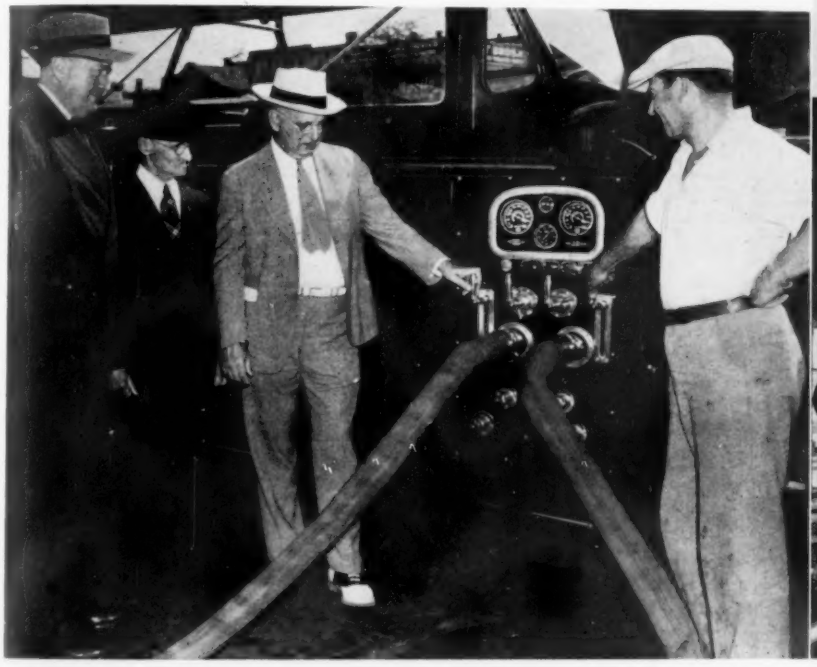
It lasted, moreover, for one hour during which the city's defense services reported and dispatched equipment and men to eleven test incidents of a character which might easily occur in case of air attack.

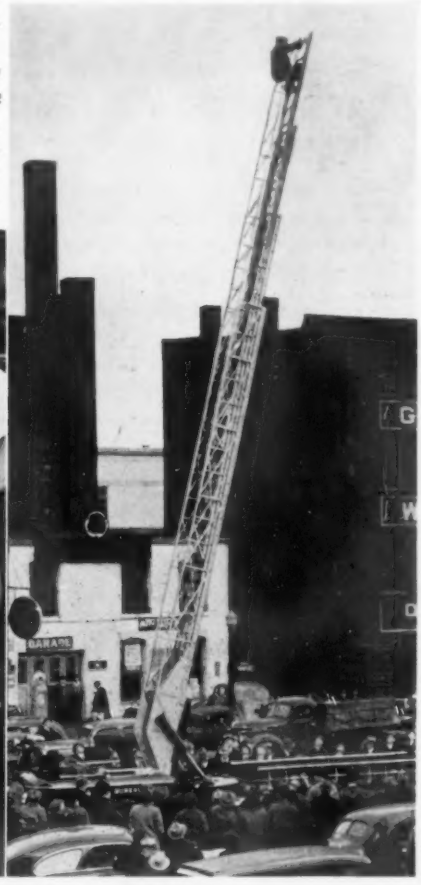
The sirens are the regular alternating-signal, 2-hp sirens located at the intersection of Genesee and Elizabeth and at United Square. Made by the Sterling Fire Alarm Co., they have been used here for over ten years to clear the downtown streets in case of fire. The sirens are supplemented by the discharge of two signal bombs at each of 10 fire stations.

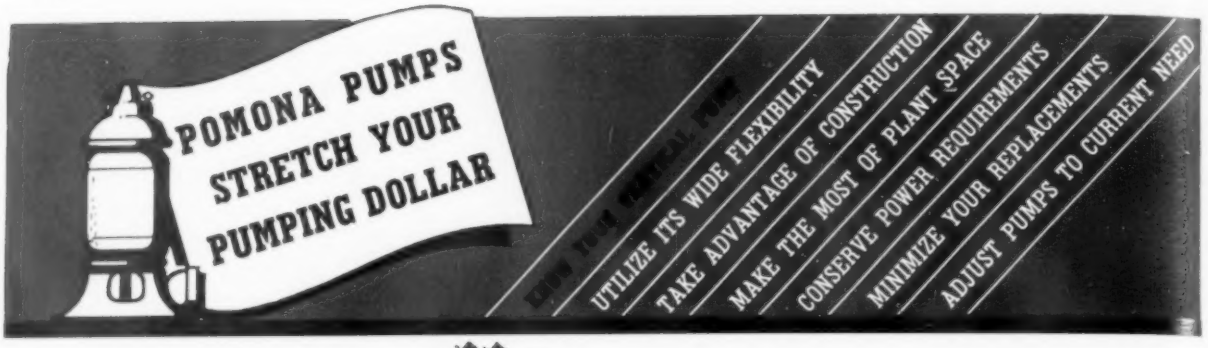
Police control is handled by 757 auxiliary policemen, 165 regular officers including 12 squad cars equipped with General Electric two-way radio, and 8 Harley-Davidson motocycles.

The 205 regular and 480 auxiliary firemen have at their disposal 12 American-LaFrance pumping engines, including one of 1,500-gallon capacity, five of 1,250-gallon, three of 1,000-gallon, and three of 750-gallon capacity; three A-LF aerials and two city-service trucks. Every piece of apparatus carries Indian fire pumps. Commissioner J. N. Sullivan, who observed the demonstration in his capacity of Chairman of the New York State Fire Defense Committee says: "The Indian Fire Pump is the ideal equipment for controlling incendiary bombs and all ordinary small fires."

Shown below are Mayor V. R. Corrou (far left) and Commissioner J. N. Sullivan (left hand on valve of pumping engine); an aerial ladder truck. At bottom are photographs of the Indian fire pump as used on brush and forest fire service. This is the portable pump that Utica carries on all its fire apparatus



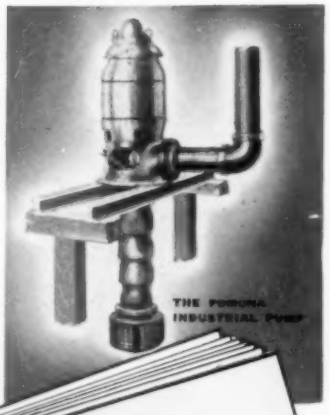




(A Message to Pomona Pump Owners)

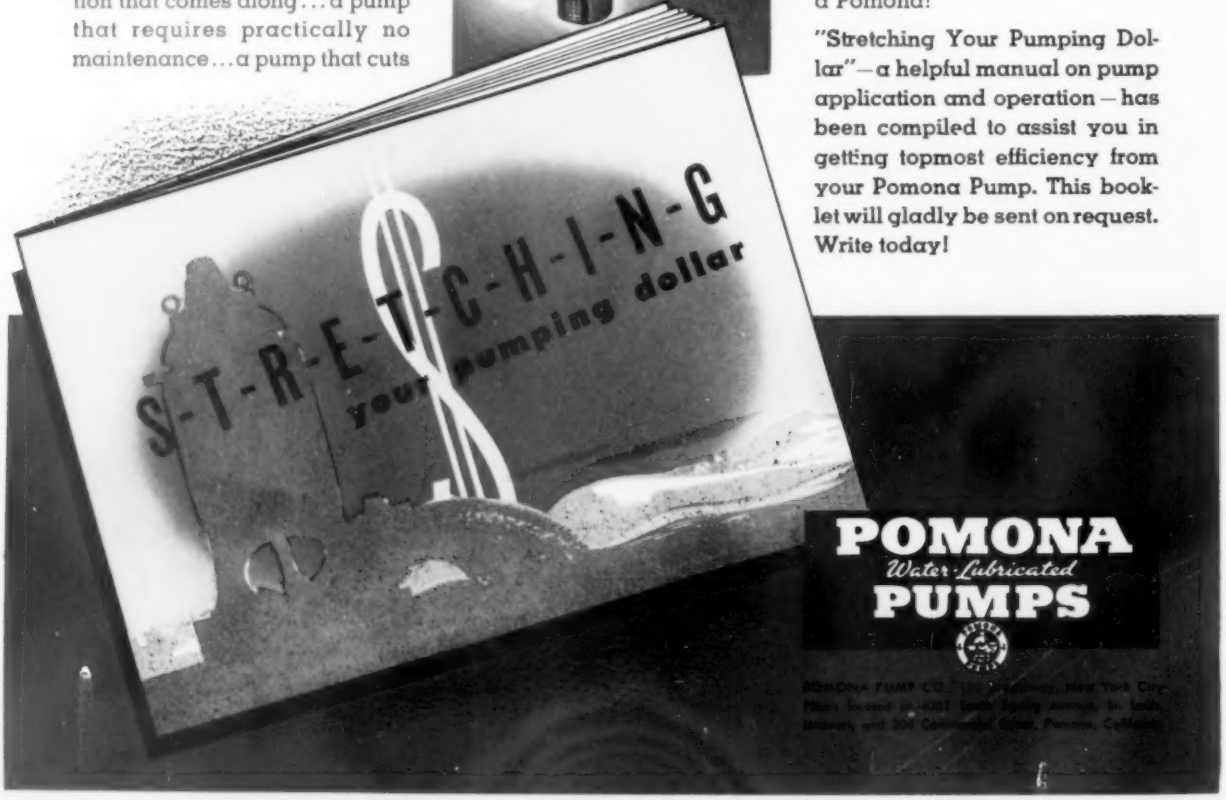
YOUR POMONA PUMP IS BUILT FOR OUTSTANDING PERFORMANCE. KNOW ITS MANY FINE FEATURES!

In these times you can be *doubly* thankful you own a Pomona Pump. For in your Pomona you have the best possible pumping equipment with which to weather the present emergency. You have a pump that is extremely simple in construction... a pump so flexible it can be quickly and easily adapted to handle practically *any* type pumping operation that comes along... a pump that requires practically no maintenance... a pump that cuts power bills to the bone. In short, you have a pump that can be used for a wide variety of jobs, that will *keep* pumping far longer, with minimum servicing, at lowest over-all operating cost—*all important considerations in these times.*



But, to take the *fullest* advantage of the many practical performance features built into your Pomona, first make sure you *know* all about your pump. There may be features in your Pomona you didn't know about, or have forgotten about . . . features you can use to even better advantage and thus obtain still *greater* service from your investment in a Pomona!

"Stretching Your Pumping Dollar"—a helpful manual on pump application and operation—has been compiled to assist you in getting topmost efficiency from your Pomona Pump. This booklet will gladly be sent on request. Write today!



Keep Up-to-Date on New Equipment

Please check over the following list of interesting catalogs obtainable free of charge and either write direct to the manufacturers for their literature, or, if you prefer, put a circle around the identifying numbers below to indicate the catalogs you want, mail this coupon to The American City Magazine, 470 Fourth Ave., New York, and we will see that the catalogs are sent to you without expense or obligation on your part.

8-42

348	349	350	351	352	353	354	355
356	357	358	359	360	361	362	363
364	365	366	367	368	369	370	371

Name ..... **Position** .....

Address .....

New Refuse Incinerator System

348. The new Atlanta incinerator using a revolutionary design known as the Volund patented system is able to operate with a remarkably high degree of efficiency. This system is manufactured by F. L. Smidth & Co., 60 E. 42nd St., New York. Literature on this system and how it will fit your incinerator requirements will be furnished on request.

Meters That Save Critical Metal

349. Water-works operators should be interested in literature by the Pittsburgh Equitable Meter Co., Pittsburgh, Pa., describing both their Empire Victory Meter and their Pittsburgh Ironside Meter. Both conserve over 70 per cent of the vitally needed bronze normally used in the construction of meters of this size. The Empire Victory meter employs the time-tested oscillating piston principle of measurement, while the Pittsburgh Ironside Meter is of the widely used disc type. Water-works men will find that these meters retain the customary accuracy and are provided in the necessary models to meet practically every type of domestic meter requirement.

Lubrication for Longer Maintenance

350. City officials faced with maintaining their equipment "for the duration" will find the lubricating information and advice furnished by the Texas Company highly useful. This company points to the outstanding performance its lubricants have given under difficult conditions. You may obtain this information by writing to The Texas Company, 135 E. 42nd St., New York.

Army Twill for Municipal Uniforms

351. Are you interested in information on equipping your city forces with trim and attractive uniforms out of fabrics that will give durable economical service? Reeves Brothers, Inc., 54 Worth St., N. Y. C., will send a free, colorful leaflet illustrating their Reeves army twill. This material meets exacting U. S. Government tests for wear, long life, and color fast.

Time-Tested Gate Valves

352. A new folder issued by the National Machine Works, 1559 N. Sheffield Ave., Chicago, Ill., illustrates and gives operating details for the various time-tested gate valves that it manufactures. It describes the operation of these valves under various hydrostatic pressures and states that special construction of valves to meet particular needs will be developed promptly by its engineering staff. Estimates and engineering council also are available at all times. When writing for this folder ask for "National Water Works and Sewage Works Plant Equipment."

Quick, Inexpensive Cross Connections

353. Water-main cross connections have now become essential: first, to facilitate quick repairs in case of air raids, accidents, or sabotage; second, to allow for better distribution to meet the needs of growing communities or industrial areas. The Smith tapping machines do the work of cross connection quickly with no need of shutting off the water. You can rent these machines and other related equipment plus the services of experienced operators. Complete catalogs covering this service and equipment will be sent promptly by The A. P. Smith Mfg. Co., East Orange, N. J.

Meter Maintenance Lowers Operating Costs

354. Water-works superintendents realize now as never before the importance of meter maintenance and testing. The Neptune Meter Co., 50 W. 50th St., New York, states that in one city the repairing and maintaining of 229 meters cost only 24.2 cents per unit. The average length of time between tests and repairs was 73.5 months. This company will furnish bulletins and practical advice on maintaining and testing meters upon request.

"Air Lock" Outdoor Water Fountains

355. Water fountains, like other efficiently operated equipment, should be simple and fool-proof in construction to avoid repairs and maintenance costs. The construction of the Murdock outdoor water fountain is simple. Repairs, consisting at the most of rewashering, are a matter of minutes with costs computed in cents. These fountains are built to endure, they are fool-proof, vandal-proof and anti-freezing. Bulletins on these fountains are available by writing Murdock Mfg. & Supply Co., 426 Plum St., Cincinnati, Ohio.

Mobile Chlorinating Unit

356. Meeting wartime requirements for a fully equipped portable chlorinating unit, Proportioneers, Inc., 99 Codding St., Providence, R. I., has produced new highly efficient portable chlorinators mounted either on trailers or on framework suitable for easy transportation. These units contain equipment for pumping, purification, fire-fighting, and decontamination and are designed particularly to meet present-day civilian defense requirements. New bulletins fully describe this equipment.

Lead for Service Pipe and Calking

357. Recent issues of "Lead," a free publication issued by Lead Industries Assn., tells water-works operators that they have at least one customary metal still at their disposal. No government order now prohibits the use of lead for either service pipe or calking joints on mains. Lead supplies are sufficient to meet promptly both military and civilian requirements. You may obtain this publication discussing the uses of lead by writing to Lead Industries Assn., 420 Lexington Ave., New York.

Keeping Roads in Fighting Trim

358. Street superintendents realize the importance of keeping their streets open and able to carry essential traffic. Barrett Division of the Allied Chemical & Dye Corp., 40 Rector St., New York, will send its new free Tarvia Manual showing how to use Tarvia and stretch your maintenance dollar to do more work.

Portable Heavy-Duty Vacuum Cleaner

359. Municipal utility operators all realize the importance both in regard to operation and also to general appearance in having equipment and premises clean. The Tornado portable industrial vacuum cleaner, with its increased power, its easy availability, and large dirt capacity, is one answer to this problem. You may obtain details and arrange for a free trial by writing the Breuer Electric Mfg. Co., 5102 N. Ravenswood Ave., Chicago, Ill.

Using Compressed Air to Speed Construction

360. Municipal officials responsible for the maintenance of water, sewerage, and transportation facilities will be interested in bulletins describing the Gardner-Denver air compressors. This equipment finds a multitude of uses in maintaining existing systems as well as in constructing new ones. The company points out that these compressors require no pampering and assure plenty of air regardless of weather, altitude, or temperature extremes. For complete information on the Gardner-Denver machines write to Gardner-Denver Co., Quincy, Ill.

Fire Hydrants with Removable Barrel

361. Realizing the difficulty and general inconvenience of replacing a fire hydrant if it must be dug loose with a pick and shovel or pavement breaker, R. D. Wood Co., 400 Chestnut St., Philadelphia, Pa., has designed the Mathews Hydrant that will simply unscrew at the elbow. The barrel contains all operating points and may be lifted out through its loose protection case and replaced with a spare. The barrel then may be repaired at your own convenience in the shop. This results in saving time and money and gives added fire protection.

(Continued on page 18)

for service pipes and calking

No government order now prohibits you from using lead for water service pipe or for calking joints on mains. This is because lead is in sufficient supply so that all military requirements are being met promptly and enough lead remains for many civilian purposes, particularly for such essential industries as water distribution.

Water works which have used lead need not look for a substitute for this time-tested material; others can use lead to solve their critical material problems.

SEAL OF LEAD INDUSTRIES' APPROVAL

Lead pipe and calking lead stamped with the "Seal of Approval" meet the Standards of the Lead Industries Association which are currently identical in substance with those of the National Bureau of Standards. Insist on this Seal on the lead you buy for dependable quality.

If you are not receiving our helpful free magazine, LEAD, write for your copy and keep up with the latest developments in lead.

LEAD INDUSTRIES ASSOCIATION

420 LEXINGTON AVENUE, NEW YORK, N. Y.

YOU'RE MONEY AHEAD WHEN YOU WORK WITH LEAD

WHICH OF THESE CATALOGS WOULD YOU LIKE?

(*Continued from page 17*)

Collecting and Hauling Garbage and Rubbish

362. For collecting and hauling garbage and rubbish, municipal officials will be interested in the new Load-Packer developed by Gar Wood Industries, Inc., 7924 Riopelle St., Detroit, Mich. These bodies are reported to be able to take from 30 to 100 per cent greater loads than other similar bodies. They reduce the number of men required and are designed with a low loading hopper for ease of operation. This company will send on request bulletin No. 27 illustrating the Load-Packer.

A Refuse Incinerator Produces Revenue

363. The recently constructed incinerator at Atlanta, Ga., is one of the few in the country that produces a revenue through the sale of steam. It is of new and revolutionary design greatly increasing the quantity of generated steam. The design has been based on extensive studies of incinerator systems both in this country and in Europe. Robert & Company, Inc., Atlanta, Ga., architects and engineers, designers of this incinerator, will furnish folder describing this project.

Controlling Water and Sewage Plants

364. Water- and sewage-plant operators throughout the country recognize the importance of accurate instruments for the control of plant operation. For full information on this type of equipment and how it can be fitted to your plant write to Builders-Providence, Inc., 9 Codding St., Providence, R. I.

Maintaining Small Motors

365. The Briggs & Stratton Corp., Milwaukee, Wisc., emphasizes that since manpower and construction facilities of their organization are devoted to the war program it becomes more important for the hundreds of thousands of civilian users to keep the performance of their motors at a high peak. This can be done by proper care and inspection and by replacing worn or broken parts. The Briggs & Stratton Corp. is ready to give assistance and advice in regard to the maintenance of these motors.

Joining and Repairing Pipe Permanently

366. A pamphlet by the Dresser Mfg. Co., Bradford, Pa., titled "How To Join and Repair Pipe" discusses in a practical manner the methods of making these connections. This pamphlet tells what these connections are, how they work, their advantages and their sizes. It contains instructive illustrations covering their use both to close leaks and joints and to repair breaks in pipe.

Wartime Street Lighting

367. During a blackout is your street lighting system under control? In case of a bombing can you cut out the destroyed section and quickly put the remaining undamaged sections back into service? Literature by the Wagner Electric Corp., 6400 Plymouth Ave., St. Louis, Mo., will tell you how their Y-H Type Constant Current Regulators will enable you to meet these wartime emergency conditions easily and economically.

Mud-Jacking as a Maintenance Operation

368. All street superintendents should have a copy of the new mud-jack bulletin published by Koehring Co., Milwaukee, Wisc. Concrete slab maintenance by the use of a mud jack has long since passed from the novelty stage and now may be considered a method proven by strict practice. The Koehring mud jack raises sunken concrete walks, curbs and gutters, driveways, and other similar construction eliminating reconstruction costs. Concrete slab maintenance costs can be reduced as much as 75 per cent.

Root Cutter Does Thorough Job

369. Expanding Sewer Machine Co., 108 E. Walnut St., Nappanee, Ind., has a complete line of sewer-cleaning equipment, including their root cutter and sewer cleaner. This will do a thorough job of cleaning sewer walls, top, sides, bottom, cutting and removing the roots and cake sediment. This company will gladly send the new catalog describing this equipment.

Economies in Fire Hose

370. Bulletins on the Bi-Lateral fire hose describe how it has been particularly designed so that it may be held in a flattened position between services. This not only saves the city replacement by giving longer service, but also makes it possible to load 25 per cent more on the apparatus-bed. Write the Bi-Lateral Fire Hose Co., 20 N. Wacker Drive, Chicago, Ill.

Floatless Controls

371. B/W all-electric floatless controls make possible closer and more accurate control of liquid levels in wells, tanks, and reservoirs. Write B/W Controller Corp., 2200 E. Maple Rd., Birmingham, Mich., for literature.

Vol. LVII, No. 8 The American City August, 1942

Creeping Paralysis of Local Transportation

By Harry L. Aumack
Planning and Traffic Engineer
Spokane, Wash.

NO EVENT of the war has rocked this nation so fundamentally as the sudden pinching off of its rubber supply. The impact of this event is the more insidious *because of the reluctance of the country's people to accept the full significance of the fact of "No More Rubber."*

An inventory of the rubber stockpile of the nation warrants no such optimistic attitude. The stockpile of new and reclaimed rubber of the nation is also the stockpile of all the United Nations. No miracle of mechanical or chemical ingenuity of the American people can quickly challenge that fact. Those essential needs of armies and their weapons rolling on rubber, and those other needs upon which our mechanized civilization depends, far surpass the supply on hand.

Precious little of this can or will find its way to the wheels of our vast fleet of 33,000,000 motor vehicles now in the United States. Any rubber for civilian tires can only be made available at the expense of war needs. The "stockpile" of rubber for these vehicles consists of the tires now on their wheels. That stockpile is not only the collective property of the individual owners; it is also a vital resource of the nation at war.

Auto Owner the Custodian of the Nation's Rubber

Each of those 33,000,000 automobiles, trucks, buses, and taxicabs is a unit of vital war transportation. That fleet is the first transportation link in the war materials supply system. *The automobile owner is the custodian of the transportation unit which must outlast the nation's enemies.*

This war will be won or lost on the ability of the nation to turn out war materials and get them into the hands of fighting forces. The transportation link to the battlelines is vital; the transportation link from raw materials' source to factory, from factory to factory, from home of worker to factory are equally essential. A study of the industrial war machine shows these significant facts:

Almost every factory uses rubber-tired trucks to haul material in or out of its gates.

Every factory is dependent on rubber-shod buses and private automobiles to get workers from their homes to the factory. Three out of every four workers depend on their own automobiles to get to work. For newly constructed war industries located on the edge of large industrial centers, 90 to 100 per cent depend on private automobiles for getting to work. We are dependent on the mobility furnished by the motor vehicle.

With normal usage, tires wear out at the average rate of 3½ per cent per month. If all the 33,000,000 motor vehicles were equipped with new tires today motor transportation would disappear entirely by the fall of 1944. But they are not all equipped with new tires—creeping paralysis has set in. Many of the oldest cars equipped with the oldest tires are owned by the worker manning the vital war industries. A plan for conservation of this war transportation on a national scale must be put into immediate effect.

Spokane Typical

Spokane's picture is similar to that of the country in general, as we have a local problem of private passenger cars going out of service and the overloading of the bus lines. This is being seriously complicated by the construction and beginning operation of several large war industries and plants.

To help in solving this problem, the City Plan Commission of Spokane has set up a War Transportation Committee whose activities will be:

To supervise the study of the use of the transportation facilities and hours for all industrial, business, and school groups from which all recommendations for adjustments and improvements must come.

To coordinate these data and recommend a plan for the most efficient use of all equipment and the conservation of machines and tires.

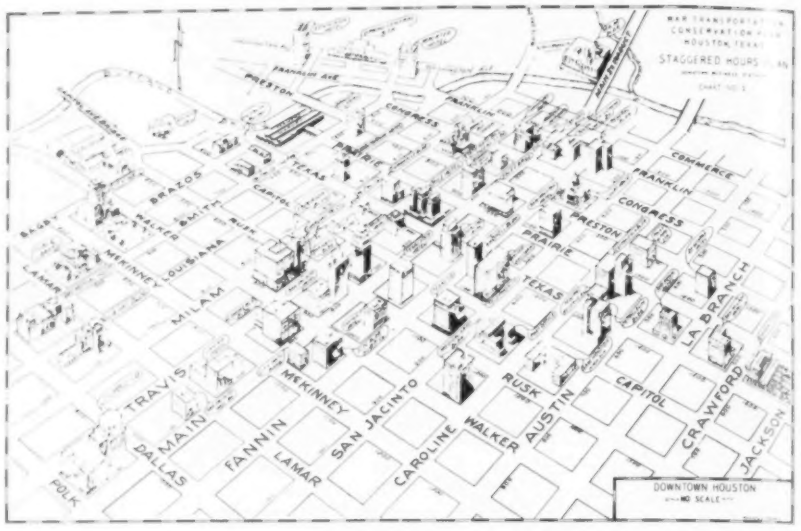
To obtain the adoption and successful operation of the plan.

The problem can be more readily understood if we consider the comprehensive traffic survey made by the City Plan Commission in 1937, which indicated that persons making round trips between the central business district and the residential districts totaled 21,893 in buses and 56,776 in automobiles each day from 7:00 a.m. to 7:00 p.m. The bus transportation represented approximately 28 per cent of the passengers carried.

As a result of tire and gasoline rationing, the local bus company reports that their system handled 23 per cent more passengers in April, 1942, than in April, 1941. The Auto Interurban Co. reports a 1942 passenger increase of 125 per cent. These increases have overtaxed the facilities of the compa-

nies, and many persons have found it impossible to obtain transportation on local buses during the rush hours without long waits and excessive overcrowding.

Defense workers, including both construction and operating personnel, numbered 3,105 in May, 1942. This increased to 7,845 in June, 11,000 in July, and will continue at approximately 13,500 until October, at which time some of the defense construction work will be completed and there will be a slight drop in the number of workers—until the increase due to permanent operating workers will bring the total to 18,700 by May, 1943.



How Houston Staggered Hours

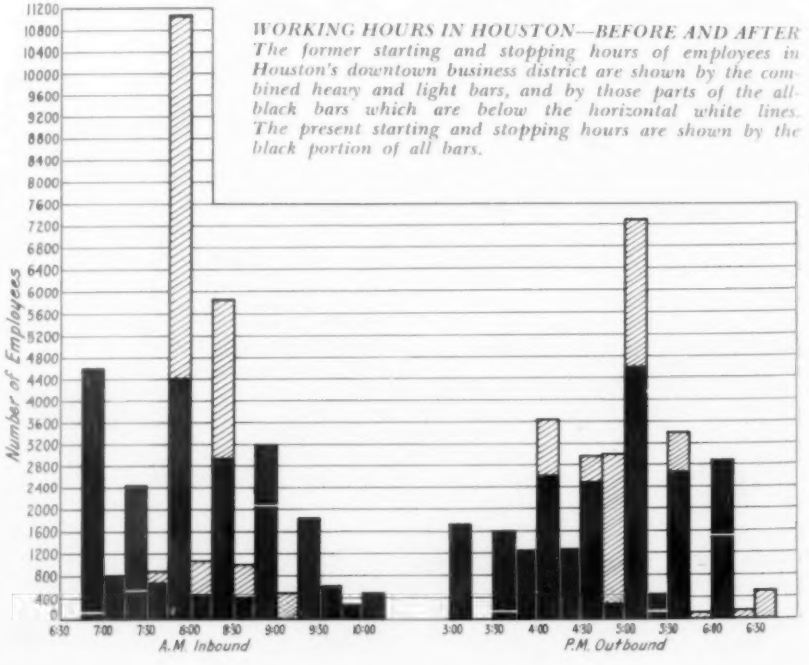
By C. A. Pickett, Mayor
Houston, Texas

IN HIS letter of April 24 to the mayors of all the larger cities, Joseph B. Eastman requested the adoption of a Plan for Conservation of Vital War Transportation and the appointment of an official administrator for each city. As Mr. Eastman indicated that consideration of the conservation program should be "an official administrative responsibility," I designated Thos. E. Willier, our city traffic engineer, as local administrator and requested speedy adoption of transportation conservation plans. The Houston Chamber of Commerce appointed an emergency transport committee to assist Mr. Willier. The administrator and the committee established the following objectives:

1. Prepare a staggered hours plan for the downtown business district.
2. Prepare plans for providing greater capacity on buses on certain routes by staggering working hours of employees of particular companies and large manufacturing plants.
3. Aid war production plants with their transportation problems.
4. Consider emergency traffic regulations.
5. Prepare plans for "group riding."

Three separate surveys were conducted to collect facts. Questionnaires were distributed to workers in the business district to determine starting and stopping times of employees and their use of buses and automobiles; a field check was made of buses and bus passengers entering and leaving the business district; and a survey was made of all automobiles and persons in automobiles entering and leaving the downtown district. These surveys were all completed in one day, May 21.

Owing to the difficulty of obtaining men to make the count of automobiles, the survey was conducted with the assistance of 70 volunteer women from the Office of Civilian Defense. These women worked for three hours in the morning and three hours in the afternoon and they produced accurate results. The city traffic engineering divi-



WORKING HOURS IN HOUSTON—BEFORE AND AFTER
The former starting and stopping hours of employees in Houston's downtown business district are shown by the combined heavy and light bars, and by those parts of the all-black bars which are below the horizontal white lines. The present starting and stopping hours are shown by the black portion of all bars.

sion analyzed all the field data. A program for rearranging working hours of employees in the business district was then prepared by Mr. Willier, and he compiled a comprehensive report on the Houston Staggered Hours Plan. Many requests have been received for copies of the published report, and the Highway Traffic Advisory Board in Washington, which is supervising the war transportation program, has requested copies for its state committees.

The Houston Staggered Hours Plan was approved by the committee on emergency transport and presented to the business organizations affected. Within a few days, the Retail Merchants Association and all the offices and stores agreed to adopt the new hours, and the schedules became effective on June 15, only one month after work was started on the Plan. Surveys conducted by our administrator and by the local bus company indicate that the staggering of working hours reduced the average number of persons per bus during the morning and afternoon peaks.

Mr. Willier and the committee are now working on plans for "group riding" and for aiding the war plants with their transportation problems. All the citizens of Houston accepted the staggered hours regulations which in many cases caused considerable inconvenience to workers. This spirit illustrates the willingness of our people to sacrifice to achieve victory.

Seattle's Trolley Coaches Face Triple Loads

By RAY L. JOHNSON
Executive Secretary
The Transportation Commission of the City of Seattle

THE Seattle transit system is a municipally owned unit of the city government, operated entirely separate and distinct from the city administration by a Commission of three members who serve without remuneration. The Commission is self-perpetuating.

The system itself is operated on a rubber-tire basis entirely, the last street-car having disappeared more than a year ago. Seattle is the first major city in the United States to adopt a 100 per cent rubber-tire system of public transit. Both trolley and motor coaches are used in about equal numbers, the trolleys having a slight preponderance.

The shape of the city and the nature of the terrain make operation more difficult than in the average city. Seattle is located on many hills; steep grades, short blocks, and many curves are encountered all over the city. We cover an area of about 75 square miles, almost in the shape of an hour glass, and there is an unavoidable traffic bottleneck at one side of the neck of this hourglass. The 41 different routes operate over more than 300 miles of city streets, the mileage being about 410,000 miles per week. The trolley coaches are used on the heavy lines, motors being used on the lighter and feeder lines.

This heavy loading is increasing rapidly, and the figures two or three weeks from now will probably average 5,000 to 10,000 more riders daily than those just quoted. It is conservatively estimated that if the gas and rubber situation continues to lay up private automobiles progressively as it is doing right now, in October of this year we will be called upon to transport an average daily load of 590,000 riders; in April 1943 this will increase to 710,000, and in October 1943 we will be asked to haul about 790,000 passengers per day.

Every trick of the trade has been put into effect to try to fulfill our obligations to the public—skip-stops, express service, turnbacks, constant surveys and checks on all lines, and switching of equipment to conserve seats and standing space—and our people are continually on the alert for every opportunity further to conserve. Recently Mr. Colman's committee has put into effect an hour-staggering plan which is already having its good effect in the way of spreading both morning and evening peaks. We have been watching this with a great deal of interest and are very favorably impressed with the progress made.

The only thing that will actually relieve the situation is adequate equipment to handle the business. Applications have been made (a vast amount of research having been done to supplement them) for additional coaches. This matter is now pending in Washington for the necessary priorities. Without these additional coaches we do indeed face a blank wall.

The change-over and rehabilitation of the old street-car system started prior to 1939; hence the fleet of coaches, designed on a peacetime basis to handle about 228,000 riders per average week day. Subsequent slight additions to the fleet have increased this "capacity" to about 250,000 passengers. The enormous expansion of the big war industries, principally airplane and shipbuilding, has increased the population of Seattle from the 1940 census figure of 367,000 to the 1942 sugar-rationing computation of about 510,000—an increase of 140,000 people, or 37 per cent. Our average weekday loading is now about 375,000 riders, our heaviest day totalling 389,408—all this with a "capacity" of 250,000!

Coatesville's Part in Equipping an Army

In a One-Week Drive This Little Pennsylvania City Collected 680,761 Pounds of Scrap—Enough To Build Our Army 36 Light Tanks. This Drive Cost $2,400 and Netted $5,308 in Revenue. Here Is How It Was Done

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COATESVILLE, PA., an active little city of 14,582 population, cooperating with an aggressive local industry, has pointed the way for cities and towns throughout the nation to follow in the collection of scrap. By intelligent planning and resourceful organization, this city in a one-week drive conducted last April collected 680,761 pounds of scrap — more than 46 pounds per person or enough to build 36 light tanks.

Actually there is little difference between Coatesville and hundreds of other communities with the exception of possibly one feature: the main industry is a steel company normally manufacturing steel plates and similar materials. However, this company—the Lukens Steel Company—now is engaged wholly in building war equipment and material. As a result, every citizen of Coatesville realizes intimately the striking necessity of obtaining all possible scrap in order to keep this vital war industry operating.

Easily one of the outstanding features of the drive is its direct, straightforward approach. City officials, together with the Red Cross and the Chamber of Commerce, planned the drive to get the scrap from the householders or other "dormant" sources to the proper war industries in the quickest, most effective manner. They selected a central collecting yard, arranged with their city-owned trucks to collect the scrap from householders, and also encouraged householders to bring the material to this yard themselves. A preliminary separation of the material was made in this central yard, and it was intelligently arranged for disposal through the regular dealers in scrap.

Having a well-integrated plan in mind, the city then formulated an aggressive drive backed by an organized advertising program. Effective advertising copy was prepared and run without charge by the local newspaper. Moving picture publicity was donated by the local theatre. The Red Cross made a house-to-house canvass of the entire city urging people to make a determined search of their premises to uncover salvage material, at the same time giving them intelligent directions as to what to hunt for and how to arrange for disposal. Business firms, local industries, ser-

PLAN

of the Coatesville Salvage Campaign

1. Appointment by Mayor of Chairman of Salvage Committee as a unit of the Coatesville Council of Defense.

2. Appointment by Chairman of Salvage Committee of Chairmen for Publicity, Victory Scrap Yard, Salvage Collection, Entertainment, Canvass, Demolition and Finance.

3. Appeal to civic interest through the proclamation by the Mayor.

4. Pre-campaign education of the public to the importance of salvage materials and the necessity for collecting them:
   a. Paid newspaper advertising;
   b. Reading notices;
   c. Newspaper stories;
   d. Street banner;
   e. Posters in stores and business windows;
   f. Movie trailers at motion picture houses;
   g. Sound truck on streets of the city.

5. Canvass of every home, industry and business place by organized civic agencies:
   a. Ladies of the Coatesville Red Cross;
   b. Chamber of Commerce;
   c. Members of the Council of Defense.

6. Collection Machinery:
   a. City-owned trucks making pick-ups at doors;
   b. A central point (Victory Scrap Yard) to which contributors could deliver their own scrap.
   c. Demolition crews to remove "bulky" or built-in scrap.

7. Building up interest during the Campaign:
   a. Victory Scrap Yard, in a prominent location, attractively "dressed up" with banners, posters, and a scoreboard changed from day to day as the campaign progressed.
   b. Entertainment to bring the public to the Victory Scrap Yard.
   c. Publicity:
      1. Advertising in daily newspaper;
      2. News stories on the scrap yard;
      3. Sound truck.

vice stations, and garages were similarly approached by the Chamber of Commerce. All those who cooperated and contributed to this drive were given stickers for their windows containing the following text:

WE HAVE
done our part to support our soldiers and sailors by making available all waste material so badly needed for our country's war effort ★ ★ ★ ★
HAVE YOU?
Signed _____

The drive was launched by proclamation by Mayor A. G. Luebert. The active support given the drive by civic organizations and the city forces enabled everyone to know exactly what to do and encouraged them all to go into action. The public went to great lengths to cooperate in this drive. An obsolete printing press was contributed by one firm. Old boilers and worthless furnaces were uncovered in a number of buildings. Children contributed toys. War veterans contributed souvenirs regardless of their sentimental value. Even a few historic relics of Old Ironsides found their way into the scrap heap.

To add to the interest of the program, the city organized evening programs of community singing and other entertainment with the admission price being a piece of scrap material.

In order that the effectiveness of the drive might be brought home more graphically to each individual, the salvage committee constructed a chart that interpreted the amount of the salvage in terms of light tanks. When the drive had been completed, it was estimated that there was enough material collected to construct 36 such tanks.

It is interesting to note that purely from a financial angle the drive was successful. The cost of the drive amounted to $2,400 which, incidentally, was contributed by Lukens Steel Company; however, the sale of the scrap actually totalled $5,308. This total amount was contributed to the local Red Cross chapter.

"The results that the Coatesville salvage program have produced," states Paul C. Cabot, Deputy Director of the Conservation Division, War Production Board, "can and should be duplicated in every city, town, and village throughout the country. Such patriotic efforts will enable us to uncover vast quantities of scrap materials now lying dormant and unused. Coatesville should be congratulated in leading the way toward the municipalities' participation in the war effort."

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Some Fundamentals on Scrap Collection

REMEMBER that the basic principle back of scrap collection is to transfer the material from its dormant stage in backyards, basements, garages, and attics into active war production as quickly and efficiently as possible. The scrap drives should not be considered primarily from the money-making angle.

Because the average householder's accumulation of scrap material is comparatively small, and the prices that can be paid are inconsequential, it is desirable to encourage householders to donate their scrap material as a patriotic gesture. If the community itself is using its own street department trucks to collect the material, then the proceeds may well be turned over to the USO, Red Cross, or similar organizations supporting the war effort. If an organization like the Boy Scouts is used, then let the Scouts keep whatever money they can obtain.

Sell by Competitive Bids to Junk Dealers

Once the material has been collected and deposited at some central spot, it should be offered for sale by competitive bids to nearby scrap dealers. There is no ceiling on the price a dealer may pay for such unprepared material. But he must sell to consumers at government prices and must move his stock in 60 days. The reason for selling this to the scrap dealers is that they have facilities to segregate this material property. Without this segregation, the entire lot is useless. There are 75 different grades of iron and steel scrap alone, so that the segregation must be made by experienced operators. Steel companies are not equipped to do this work. The scrap dealer is in a position to process and bale the material in order to make it more suitable for shipping.

Scrap That Is Uneconomical for Cities To Salvage

A great many cities have large sources of scrap that they cannot afford to salvage under the present price ceiling. This sometimes is in the form of steel rails embedded in concrete; in obsolete bridges or buildings, the title of which is clouded, thereby presenting legal technicalities.

In these cases, the city officials should write to the Special Projects Salvage Section of the Conservation Division of the War Production Board. This section has its main office in the Railroad Retirement Building, Washington, D. C. Local Special Projects officers are also located wherever there is a regional War Production Board office.

It is devoted to salvage projects involving problems of a financial, legal, or political nature and functions through the use of WPA labor and the sponsoring of these projects through the Metals Reserve Co., a subsidiary of the Reconstruction Finance Corp.

Taxpayers Get More and More for Their Money

Municipal Expenditures Aid and Reflect High Standards of Living

By Lent D. Upson

A FORMER mayor of one of America's largest cities was protesting certain proposed expenditures for public purposes. He said: "I belong to the period of economy in government, sanity in public expenditures, prudence in city adventures, and safety for the home, industry, and the future prosperity of the city."

There was such a time in every great community—when city activities were few, operating expenses were low, and the public debt was small. The citizen received only small benefit from municipal activities and at small cost.

But the modern city is as different from the city of our grandfathers as scientific and social conditions are different from the science and society of a few generations ago. Cities have assumed new obligations. They facilitate industry and commerce, aid the sick and poor, protect the well, safeguard life and property, and provide uncounted conveniences for the householder.

The causes of this rapid and important growth in municipal services are interwoven with the economic and social changes of recent times. Perhaps the greatest single force has been the unparalleled production of material wealth resulting from scientific discoveries and their exploitation. Consider simply the changes wrought by the fabrication of steel, the harnessing of electric energy, and the development of the internal combustion engine. These inventions have made possible modern office buildings, automatic machinery, electric lights, automobiles, and trucks — innovations that have profoundly affected urban life and government.

The immediate causes are even more evident. Modern industry requires a relatively dense population from which to secure its workers, creating in turn satellite industries—rapid transportation, banking, wholesale and retail distribution—each aggravating congestion of population. Incident to congestion are the changes that arise from surrounding rural life—expensive parks and playgrounds supersede the free open spaces of the country; costly fire and police protection stand in place of the volunteer fire brigade and the town marshal; pavements are built to carry heavier and more vehicular traffic; streets are widened and extended; viaducts and tunnels are built; and the educational system is developed to meet the changing requirements of business and industry.

New Public Activities Meet Insistent Demands

Higher standards of living create an insistent demand for public activities not known or considered a decade or two ago. One by one, services usually performed or left unperformed by the individual in the smaller community are taken over by the government in a growing municipality to the general relief and satisfaction of the householder. The city not only supplies water, but with a view to greater convenience and comfort, pipes it into the home; streets are widened and parkways planted for pleasure drives and boulevards; educational facilities are expanded to include high school, and even municipal universities; ashes and rubbish are carted away; drainage and sewerage are extended; street lighting is amplified; traffic is regulated; police and fire protection are increased; monumental public buildings are constructed—all being improvements not considered necessary in other times and other places.

A changing concept of social justice impels the community to ameliorate conditions resulting from social and economic causes or individual deficiencies. The public is no longer willing to leave the complete care of the sick and poor to the ministrations of private and ecclesiastical charity; city prisons cease to be institutions for exemplary punishment and for making profit from labor of inmates, and tardily become instruments of correction; the insane, the destitute, and the incapacitated requiring institutional treatment are given larger opportunities for cure and are provided with less frugal and rigorous living conditions; vice—gambling, obscenity, prostitution, ind vicious sports—is vigorously repressed, and commercial recreation regulated.

Disease Prevention

Modern scientific progress, also, has played no small part in the increase of municipal activities and costs. For example, in medicine the discovery of the germ basis of contagious disease has made possible its effective control. Following this, the public has realized that disease prevention is more important than efforts at cure. Consequently, public health activities have been expanded with great rapidity. The citizen of the new city pays for and enjoys the benefits of quarantine enforcement, food inspection, visiting nurses, tuberculosis treatment, medical examination of school children, purification of water supply, disposal of sewage and other wastes, and kindred efforts for the reduction of morbidity and mortality.

—From the report of the Detroit Bureau of Governmental Research on "The Growth of a City Government," listed on page 87 of this issue of The American City.

Making City Pay Checks Talk

By FRED ERETH
Deputy Comptroller
City of Rochester, N. Y.

ROCHESTER, N. Y., like all other cities, has found it desirable to give the city employees a pay check that analyzes all deductions, which may average six or may be as many as ten. Up to 1940, the customary practice of simply making copies of the payroll and writing a check giving the employee's name, check number, and amount to be cashed, whether gross or net, was satisfactory. But by 1940, the payroll work had been complicated by these regular deductions:

1. Pension
2. Pension loan repayment
3. Credit Union deduction
4. Group health and accident insurance
5. Garnishees

And these occasional deductions:

6. Hospitalization insurance, quarterly
7. Community Chest deduction, annual

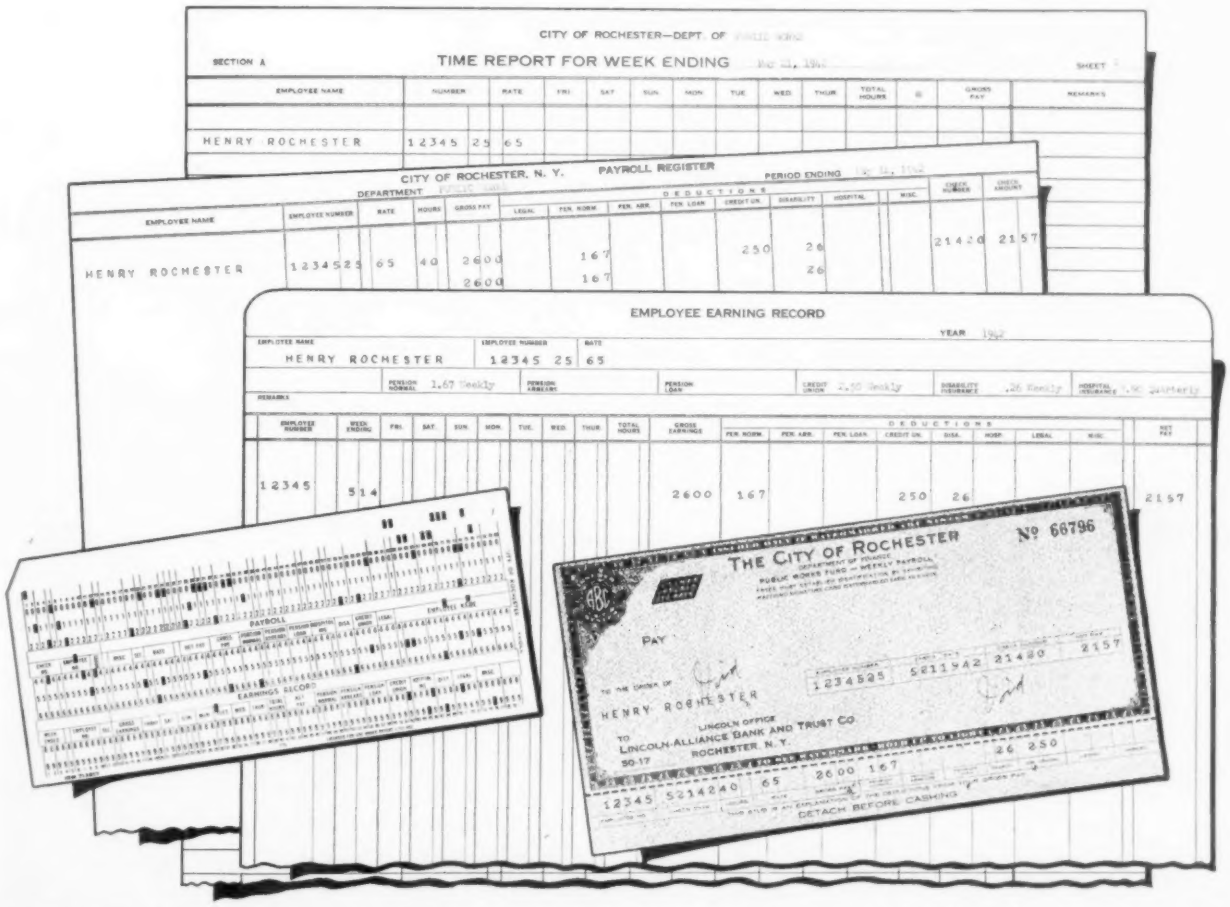
And now, since April 15, 1942, we are making deductions for war bond savings.

Therefore, in 1941, we decided to put the toughest element of our payroll work on the same I. B. M. electrical accounting machines that do our water and tax accounting and billing. This new plan takes care of the 1,500 employees whose pay is by the week on an hourly basis.

These punched-card machines prepare: (1) the payroll in five copies, interleaved with one-time carbon paper; (2) pay check, with bottom stub instead of usual side stub, explaining deductions exactly as they are shown on the payroll, together with the number of hours of work and a check number which aids in reconciling bank balances by making a machine-sorted list of uncashed checks in a half day instead of requiring three clerks to devote full time to preparing these lists; and (3) an individual earnings record for each employee, showing by pay periods the gross pay, deductions, and the net payment.

Double Checked

When this payroll job is finished in the Finance Department, the check has been dated, numbered, written with the payee's name and net pay amount, and the stub filled in with the deductions and the hours of work. The payroll itself, in the required number of copies,


CITY OF ROCHESTER—DEPT. OF
TIME REPORT FOR WEEK ENDING
HENRY ROCHESTER 12345 25 65
CITY OF ROCHESTER, N. Y. PAYROLL REGISTER
HENRY ROCHESTER 1234525 65 40 2600 167 250 26 21420 2157
EMPLOYEE EARNING RECORD
HENRY ROCHESTER 12345 25 65
THE CITY OF ROCHESTER
№ 66796
PAY
HENRY ROCHESTER
LINCOLN-ALLIANCE BANK AND TRUST CO.
ROCHESTER, N. Y.
DETACH BEFORE CASHING

Reading from top: Weekly time report, payroll register, individual employee earnings record, tabulating card, and the tamper-proof Todd ABC check with bottom stub explaining all deductions. This punched-card payroll system has proved so satisfactory for 1,500 Rochester city employees that it will be used for all 4,000 city employees

has been balanced and proven, summarized for total gross, deductions, net. All this work, including the additions and subtractions for 6,000 checks per month, is performed by the tabulating machines. The individual earnings record makes it easily possible to answer such questions as "How much income must I pay tax on?" and "How many more payments have I to make on any deduction?" At any time we can make a list of employees having any specific type of deductions.

When off the tabulating-machine assembly line, the checks are sent, with a copy of the payroll, to the city treasurer for signing. He does this with a Todd adding-listing Protectograph which, working in tandem with a Todd signer, also counts the checks and totals their amounts for comparison with the totals on the payroll.

The ABC check system is used, whereby identification cards are issued to employees, enabling them to cash their checks where they are not known, if they produce the identification card.

The other 2,500 employees of the city of Rochester, who are paid semi-monthly on an annual basis, are paid by the Todd Protod-Greenbac check without stub. Although no identification card is issued to these employees, as under the ABC check system, the check itself is of the same tamperproof paper stock as the ABC check. Any erasure brings out the words "void void." These payrolls and checks are prepared by Addressograph, and the checks are signed, protected, and audited by Protectograph.

The new system has proved itself better, quicker, less expensive, and when conditions permit we plan to extend it to all city payrolls.

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Emergency Disinfection of Drinking Water

INSTRUCTIONS in a circular published recently by the New York State Department of Health outline recommended procedure for the treating of drinking water that has been obtained from sources that are questionable or unsafe. This has been prepared as part of New York State's water-works defense procedure. However, the instructions are equally applicable during other emergency situations such as floods, droughts, or similar disasters.

These methods are outlined as follows:

Boiling—if fuel is available, the most reliable method of rendering water safe for drinking purposes is by boiling for at least two minutes.

Disinfection—if fuel is not available, the water should be disinfected as described below. The following equipment is needed.

1. A bottle or jug or other suitable vessel of one gallon capacity
2. Medicine dropper
3. One of the disinfecting agents noted below

Chloride of Lime or Bleaching Powder—This powder is available at most grocery stores. Make a paste with one level teaspoonful of chloride of lime powder and a little water. Then add this paste to a one-quart bottle of water and shake thoroughly. Allow the resulting disinfecting solution to settle. This solution loses strength and should be replaced with freshly prepared solution each week. Add one teaspoonful or 75 drops of this solution to one gallon of water in the bottle or jug. Mix thoroughly and let the disinfected water stand at least 30 minutes before using. For the disinfection of larger quantities, add one teaspoonful of disinfecting solution to each gallon, such as 50 teaspoonfuls to 50 gallons of water in a barrel. One ounce of chloride of lime powder made into a paste will disinfect 1,500 gallons of water if thoroughly mixed with the water.

Zonite—This disinfectant is sold in drug stores. Add 10 drops of Zonite to a gallon of water, let the disinfected water stand at least 30 minutes before using. Seven teaspoonfuls of Zonite will disinfect 50 gallons of water.

Liquid Bleach—Add two drops of one of the laundry bleaches sold in grocery stores to one gallon of water. Let the disinfected water stand at least 30 minutes before using. "Clorox," "Dazzle," "White Sail," "Rainbow," "Rose-X," and other commonly available laundry bleaches containing 5 per cent of chlorine by weight may be used; or add four drops of bleaches like "S. K." or "101 Solution," containing 2½ per cent chlorine by weight, to one gallon of water. (See label on bottle.)

Tincture of Iodine—Add four drops of tincture of iodine sold in drug stores to one gallon of water. Mix thoroughly and let stand at least 30 minutes before the water is consumed.

New Standards for Drinking Fountains

NEW specifications covering drinking fountains have been issued by the American Standards Association as the result of recommendations submitted to them by the American Public Health Association. The revisions clarify the language of previous specifications.

Important highlights of these revised specifications are as follows:

The fountain should be constructed of impervious material, such as vitreous china, porcelain, enameled cast iron, other metals, or stoneware.

The jet of the fountain should issue from a nozzle of non-oxidizing, impervious material set at an angle from vertical such as to prevent the return of water in the jet to the orifice or orfices from whence the jet issues. The nozzle and every other opening in the water pipe or conductor leading to the nozzle should be above the edge of the bowl, so that such nozzle or opening will not be flooded in case a drain from the bowl of the fountain becomes clogged.

The end of the nozzle should be protected by non-oxidizing guards to prevent the mouth and nose of persons using the fountain from coming into contact with the nozzle. Guards should be so designed that the possibility of transmission of infection by touching the guards is reduced to a minimum.

The bowl of the fountain should be so designed and proportioned as to be free from corners which would be difficult to clean or which would collect dirt.

The drain from the fountain should not have a direct physical connection with a waste pipe, unless the drain is trapped.

How Sewers Are Maintained in Boston, Mass.

Methods and Routine Developed Over Half a Century on This Well-Designed System

By ROBERT P. SHEA
Division Engineer
Public Works Department
Boston, Mass.

BOSTON sewer maintenance, as we know it today, began in 1876. Sixty-six years ago Boston was faced with the same problem confronting so many cities that the mere recitation of it now becomes monotonous. Inadequate sewers built without the proper thought and foresight resulted in discomfort and menace to the public health. In one of the engineering reports prepared at that time we find this statement:

"Large territories have been at once and frequently enveloped in an atmosphere of stench so strong as to arouse the sleeping and terrify the weak and nauseate and exasperate everybody."

Whether it was the eloquence of the report or the stench of the sewers that caused the Boston Council to act makes little difference. It is enough to say that, as a result, the city engineers laid out a new system of sewers so well planned that it has served Boston excellently, meeting increased demands and population growths with only minor revisions. We, who have worked on this sewer system, can testify to the foresight, ingenuity, skill, and craftsmanship of these old-time engineers such as City Engineer Joseph P. Davis and his successor, Henry M. Wightman, Eliot C. Clark, and their contemporaries.

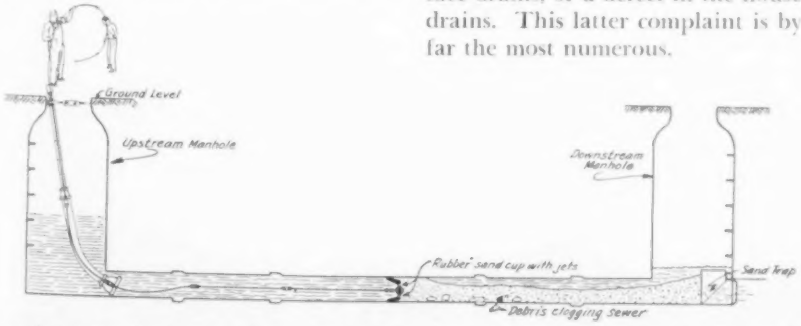
In passing, I should like to mention the objections offered by one group to the construction of this system of sewers. They stated, among other things, that "such reservoirs and outlets might be reduced to ruins in any future day of hostilities, either foreign or domestic—should such hostilities ever occur—the effect of which ruins would be the fatalities of the plague."

To date all their fears, with the exception of the last one, have been unfounded. And I can say with confidence that we will meet the challenge of the last one with the fortitude that it requires.

Classifying Maintenance Practice

Sewer-maintenance practice in Boston may be divided into five classifications:

(1) Answering complaints received from the public and arising from defects in the sewer system either in the sanitary sewers or surface drains, or a defect in the house drains. This latter complaint is by far the most numerous.



A sketch showing how the Boston Sewer Department cleans clogged sewers by the use of flexible rods and a sand cup

Tree roots removed from one of the Boston sewers in the process of sewer cleaning

(2) Cleaning catch basins; Boston has about 22,500 of these.

(3) Sewer cleaning.

(4) Maintaining intercepting sewers, including tide gates, regulators, and sumps.

(5) General repairs consisting of repairing broken sewers, rebuilding tops of manholes and catch basins, and changing of loose grates, rings, and covers.

Answering Complaints

Complaints are our direct contact with the public; they may result in damages against the city unless they are given proper attention. We have developed the practice of referring all complaints to the Permit Office where they are recorded on the complaint card and then telephoned to the district yard. The complaint report is prepared and given to the emergency crew designated to handle this particular situation. The man in charge of this crew completes the report when he returns to the yard.

This report is highly valuable. It records the time that the complaint is received and the trouble located and also describes its nature. In addition to this, under certain conditions we send an inspector to conduct a supplemental investiga-

tion and review the emergency crew's report. His report covers the cause, nature, and cost of damage. These reports then become the basis of a defense in the event some property owner places a claim for damage against the city for work by the department.

We receive our greatest number of complaints during times of storms because of catch basins that are flooded or otherwise obstructed. To prevent such difficulties, as far as possible, our entire labor force patrols the streets and catch basins during a storm.

When a house drain fails to function, our practice is to attempt, without charge, to relieve the stoppage by rodding. If this is ineffective we will, at a charge of $15, blow the drain by water pressure. In the event that we believe the owner of the property is unable to pay the charge, we do this free as a health measure. In no case do we assume responsibility for the work.

There are all kinds of variations and combinations of causes for basement flooding. Most flooded basements have no direct relation to the sewer system, but nevertheless this is the most troublesome source of complaints. If all property owners adhered strictly to city ordinances we could eliminate much of this trouble. Our chief trouble comes from old buildings that could be waterproofed if it were not for basement fixtures that make the cost of waterproofing prohibitive.

Cleaning Catch Basins

Our city forces clean about 6,000 catch basins a year. We also supplement this work by advertising for the cleaning contract of about 1,200 additional basins per year. We, of course, do not make any effort to clean the entire 22,500 catch basins annually.

For this work, we have five machines equipped with small buckets to fit into these basins. These machines receive hard usage and require careful maintenance. Each machine and bucket is overhauled once a year at a cost of $300 for the machine and $80 for the bucket. Our costs run approximately $2 per cu. yd. for the material removed. The price for contract cleaning runs about $1.25 per cu. yd.

Sewer Cleaning

We use two methods of cleaning the sewers: the usual hand winch and bucket method, and the use of flexible rods and a rubber cup.

The use of a hand winch and bucket is, of course, slow and costly. Furthermore, it is complicated in many sections of Boston by accumulations of grease which virtually cannot be separated from the sewers by grease traps. Much of this grease is emulsified rather thoroughly throughout the sewerage as a result of cooking or related practices and does not skim off easily even after being given a period of cooling. We have also developed a jetting method in conjunction with this that speeds up the operation considerably. We employ an adjustable pipe scraper and wash the sand and gravel trapped in the sewer ahead of the scraper by water jets—the water being supplied by flooding the upstream manhole and the jets being supplied by holes in a disk fitted to the scraper.

During the last three years, we have been employing with a good deal of success flexible sewer rods for cleaning purposes. This equipment consists of ¼" steel rods, each three ft. long, connected by patented couplings. The rods are introduced into the sewer to be cleaned by being threaded through a 1½" diameter guide pipe. The rods are shoved into the sewer until they strike an obstruction. The operators then drill through this obstruction working the rods by means of ratchets. Our men have been able to drill through and clean a sewer filled so solidly with hard material that it normally would have to be abandoned.

After the rods make this original passageway through the sewer, they are then equipped with a rubber cap having small holes around its circumference, the size of the cap being slightly smaller than the sewer to be cleaned. The rods are pulled from the downstream end of the sewer line until the cup has entered the sewer for three or four feet. It is allowed to remain there until the material to be removed is washed ahead of the cup by water produced by flooding the upstream manhole with a fire hose. The washing allows the cup to advance and the sand and gravel to be deposited in the downstream manhole where it is shoveled into buckets and hauled to the street surface for disposal. A sheet metal trap prevents this debris from entering the sewer below this manhole.

This method results in an exceptionally clean sewer. However, it is slow and is hard work for the operators. The approximate cost of cleaning sewers by either method runs at 60¢ per ft.

We have two crews of five men each and a foreman under the direction of an engineer who devote their time solely to the maintenance of inspecting sewers, tide gates, sumps, and regulators adjacent to both the Boston and the Metropolitan system. These crews free any stoppages that they find, remove sticks and other obstructions from the gates, and report any repairs needed. The engineer in charge of maintenance makes tests for oxygen deficiency in sewers where gas has been reported and also for explosive mixtures from gasoline or illuminating gas entering a sewer. He uses for this purpose a Davis combustible gas indicator and an oxygen deficiency lamp.

In Civilian Defense

In keeping with the times, we have organized the entire personnel of the Public Works Department to handle defense activities related to its normal work. Each division has report centers manned for 24 hours a day. At each sewer yard there is a direct telephone service from adjacent warning centers established and maintained by the Boston Civil Defense Committee. Each employee has been given an assignment card designating the location at which he is to report for duty in the event that a air raid warning is sounded. A duplicate assignment card is on file in the yard to which the man is assigned.

This article was abstracted by Mr. Shea for THE AMERICAN CITY from a paper that he delivered at the New England Sewage Works Assn., on May 27, 1942.

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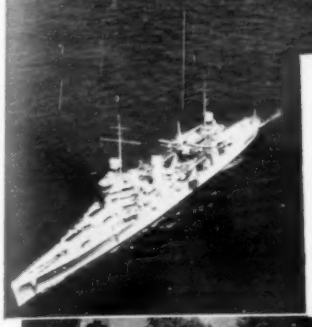
What We Defend

By GLENN WARD DRESBACH



Ask all men what we defend, and each may make
A different answer; the answers march together
Into the mightiest answer the world has known . . .
One man may say, "Sunrise on piney mountains,
The dawn wind in my face, a blue dress blowing
Beside a cabin door." And yet another
Will answer, "Sunlight on a field of corn
I planted on the prairie, and the harvest
I know will come in due time—and a light
I saw in my small son's eyes." And another
Responds, "The colors glowing on the mesa,
The cattle in the billowed grass, and sense
Of distances—and nearness." One will say,
"A cottage in a town where I was born."
And men will think of ships they love, and answer,
"The freedom of the Seven Seas—and stars!"
And men will sigh, "White steeples in the valleys!"
And younger, less conventional men will speak,
Looking you straight in the eyes, and tell you slowly,
"It's something in the blood that has known freedom
Not yet corraled in thoughts—wild mustangs pawing
The dawn on upland pastures!" Others will gesture
Across a vastness, saying, "All we know
Of life and finer meanings. We who dream
Must save the dreams to be fitted into patterns
Of better reality." And others only,
"We're going to keep the right we have to carry
Our heads up and our chests out every morning!"
And all the answers ring in one great answer
Against the forces of darkness and destruction,
Against all chains that drag down human beings,
Against all mad fools shouting while their fears
Clutch cold and tight in them, against all treason
Of men who climb to power on shattered bodies
Of men and women and children—a thundering
affirmation
Of right and justice and freedom for all peoples
Willing to die for them . . . All that *we defend!*

Reproduced by courtesy of GLENN WARD DRESBACH, author of the poem, and of HOLLAND'S, The Magazine of the South

A Children's Charter in Wartime

Local Officials and Citizens' Groups Help To Make It Effective

By KATHARINE F. LENROOT
Chief, Children's Bureau
U. S. Department of Labor

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IN THE February 1942 issue of THE AMERICAN CITY, I reported briefly some of the problems confronting children in wartime, pointing out the strategic importance of having city and county officials make certain that children are safeguarded in all essential ways. Since that time, a commission of 56 representative citizens from many different walks of life has been appointed by the Children's Bureau and has met in Washington. The chairman of this Children's Bureau Commission on Children in Wartime is Leonard W. Mayo of Cleveland, Ohio, Dean of the School of Applied Social Sciences, Western Reserve University, and President of the Child Welfare League of America. Working with him in the continuing program of the Commission is an executive committee composed of physicians, authorities in public welfare administration and education, and representatives of citizens' groups.

The Commission has adopted a program for children under the title "A Children's Charter in Wartime," which should be a guide to action in every state and every community. The Charter calls upon citizens, young and old, as a wartime responsibility and as a stepping stone to our future—and to theirs—to join together to:

1. Guard children from injury in danger zones
2. Protect children from neglect, exploitation, and undue strain in defense areas
3. Strengthen the home life of children whose parents are mobilized for war or war production
4. Conserve, equip, and free children of every race and creed to take their part in a democracy

One recommendation of the Charter is especially important for local communities. It is that every city, county, and state should review the needs of its children and youth in the light of the principles of the Charter, through a children's wartime commission or council or an existing organization designated to serve in this capacity, and should devise means to meet evident needs through the cooperative action of federal, state, and local governments and private agencies.

Something has been accomplished during the past year to provide for such over-all review of the needs of children. Many state councils of defense have committees concerned with various aspects of child welfare, and these committees have been actively at work.

Day-Care Programs

Among the subjects which have been dealt with by committees, either affiliated with state councils of defense or organized under other auspices, is that of providing day-care services for children whose mothers are employed in occupations essential to the war effort.

Eighteen state committees, including one in Hawaii, and more than 100 local planning committees or groups have been reported to the Children's Bureau to be working on the problem of the extent of need for day care and the problem of organizing day-care programs.

The Children's Bureau, the Office of Education, the Work Projects Administration, and other agencies in the Federal Government are giving leadership with respect to various phases of the problem that is being given serious consideration by the War Manpower Commission and the Office of Defense Health and Welfare Services. Plans for a comprehensive program are being developed. They will be based, first of all, on the principle that the labor supply of the nation does not at this time require active recruitment for war industries of mothers with young children, but where local situations or individual circumstances require the employment of such women the community has a definite responsibility for seeing that the best possible care supplementary to the home is provided for their children.

Such care cannot be provided exclusively through day-care centers, but must include a broad range of service — counseling service to mothers as to what resources are available, assistance in finding private homes where children may be cared for safely during the day under the supervision of qualified agencies, activities before and after school hours under public-school auspices, and the extension of nursery school and kindergarten education, school meals, and other types of enlarged school programs. Information and published material on this subject may be obtained from the Children's Bureau, the Office of Education, and other agencies, as well as from state departments of welfare and education which are the state agencies having primary responsibility in the development of these programs. State and local health departments also have a part in this work, as it is es-

> ***"We are in total war against the aggressor nations. We are fighting again for human freedom and especially for the future of our children in a free world.***
>
> ***"Children must be safeguarded—and they can be safeguarded in the midst of this total war so that they can live and share in that future. They must be nourished, sheltered, and protected even in the stress of war production so that they will be strong to carry forward a just and lasting peace."***
>
> *—Introductory declaration of "A Children's Charter in Wartime."*

sential that adequate provision for health supervision and medical care be included in any day-care program.

Prenatal and Maternity Care for Wives of Service Men

Wherever military cantonments or bases have been established there has developed a problem of maternity care for the wives of service men. The army has been forced to discontinue in most areas the provision of medical and hospital care of any type for dependents of men in the military service. The basic pay of privates and noncommissioned officers is not sufficient to provide for maternity care. The wives of service men are leaving their homes in increasing numbers to live in towns near the camps. Since they are not, in most cases, residents of the states or counties to which they have moved, there are usually no local funds available to provide for their care.

An experiment in providing service of this type is under way in Lewis County, Wash., with prenatal care by physicians and public health nurses given in various centers, home visits made by public health nurses employed by the county health department, and arrangements made for hospital care. The cost is met through funds made available by the Children's Bureau under Title V of the Social Security Act. During the first seven months of this service 132 women were given complete care and 278 others received prenatal care. Most of the patients referred so far have been from 17 to 19 years of age and each was expecting her first child. From funds available for the fiscal year beginning July 1, 1942, under the Social Security Act, the Children's Bureau has set aside $198,000 for states desiring to develop this type of program. These funds are sufficient to meet the need for only a few months, and additional public funds will have to be provided if the program is to be carried on.

Recent reports from state health officers in 33 states, the District of Columbia, Alaska, and Hawaii indicate that there are 325 military and industrial defense areas where the health services for mothers and children are insufficient—too few public health nurses, too few prenatal and child-health conferences conducted by physicians, too little or no supervision of the health of school children, too little medical care in case of illness. These conditions may endanger the health of the children and may result in higher maternal and infant mortality rates. It is especially important that efforts which were inaugurated for May Day—Child Health Day—this year to achieve nation-wide immunization of children against diphtheria and smallpox be continued in accordance with the President's Child Health Day Proclamation. Hundreds of thousands of children have already been immunized.

Recruitment of Young Workers

This summer in certain areas there is a shortage of workers to harvest the seasonal crops, and boys and girls from towns and cities are being called upon for assistance. Policies on recruitment of young workers for wartime agriculture have been developed through the cooperative effort of the Children's Bureau, the Office of Education, the Department of Agriculture, and the United States Employment Service, and have been widely circulated. Further work is being done on this problem as a result of a conference held on June 18-19, 1942, in the Children's Bureau to develop standards for the placement of young workers in agriculture, their supervision, their transportation to and from work, their working conditions, and the living conditions of those who go individually to farm homes or in groups to camps.

The Eighth Pan-American Child Congress, which met in Washington, D. C., May 2 to 9, 1942, pointed out in its final act the essential needs of children that must be safeguarded during the war period and measures necessary to protect children in danger zones and to plan for the needs of children in the post-war world.

All plans made—state, national, and inter-American—recognize that the care of children is always local and that local officials and agencies, both public and private, must provide the actual services required to assist parents in protecting and providing for their children.

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The Prelude to Post-War Reconstruction

*FROM the foreword, by The Rt. Hon. Arthur Greenwood, M.P., member of the War Cabinet and Chairman of the Ministerial Committee on Reconstruction Problems of Great Britain, to the book, "Town and Country Planning":**

Peace will come with honor and victory. When it does come the people and the Government of this country will be faced with the special duty of reconstructing the fabric of our national, social and cultural life on a new and better pattern. . . .

For these great tasks, vision and courage are essential qualities. Vision is necessary in order that we may plan for human health and happiness and in order, too, that we may make some contribution to the spiritual life of the people. Courage is necessary that we may plan boldly and on a large scale—that we may plan nationally and regionally as well as locally. Knowledge is also necessary. We must know the efforts that have been made in the past. We must realize how great was the task which faced our predecessors at the end of the last war, and how great indeed was their achievement in the period between 1919 and 1939.

Anyone who remembers the slums of 1914 cannot be sufficiently grateful to those who laid the foundations of a housing program which enabled millions of people to live under honorable conditions. We must know, too, the mistakes of the past. *No longer is there any conflict about the desirability of national planning.* That is a matter which has won the approval of a Royal Commission after the most searching examination of all the issues involved. We have learned that merely to provide good housing is not enough. We have learned that merely restrictive legislation—Acts of Parliament prohibiting ribbon development, by-laws limiting the heights of buildings, zoning for this density here and that density there—are insufficient for your purpose unless they are part of the framework of an integrated national plan.

* See page 87 of this issue.

About . . .

Ground Garbage

Delivered Directly to the Sludge Digestion Tanks

By Henry W. Taylor

SUPPLEMENTING the discussion in the July issue covering ground garbage and its effect on the sewage-treatment process, the major factors of proper design and operation may well be stated. Recognizing that there is, of course, more than one recipe for sludge cake, the following has been developed from the writer's experience.

Collection operations for a ground garbage plant must include separation of garbage from other refuse. The type of separation practiced for hog feeding is representative, in that it must exclude ashes, cans, bottles, metal, and excessive amounts of paper. Examination of the collected material will dictate the necessity of sorting prior to grinding.

As a result of experiments with various screens for garbage grinders, the conclusion has been reached that a ¾-inch size is fine enough for practical operation. Finer screens materially increase the size of the motor and the power required for grinding; screens that exceed this tend to encourage flotation and retard digestion.

Before delivery of the ground garbage to the digestion tank, the mash should be allowed to settle for a few minutes. This allows the ground garbage to float away from settling solids, such as metal, bottle caps, and pieces of heavy miscellany which are bound to find their way into the garbage and escape collection segregation or sorting.

The capacity of the primary tank should represent 2 cu. ft. per capita, unless multiple primary tanks are used in series. In the latter case, it is probable that the total capacity of these multiple primary tanks may safely be reduced. Primary tanks should be equipped with top and bottom jets or other mechanical means of agitation. The primary tanks should be deep enough to provide, in spite of violent gas agitation, a rough classification of heavy sludge at the bottom, various lighter sludges, and a thin layer of heavier sludge underneath the roof. For single primary tanks, a depth of less than 20 feet would be questionable.

Basic Design Rules

Multistage digestion tanks are required.

Storage of sludge liquors and controlled delivery to sewage influent is imperative.

Care in design must be duplicated in operation.

Primary Sludge

Primary sludge should be held in primary tanks until the moisture content of the sludge subject to transfer to secondary tanks has been reduced to about 94 per cent. A considerable quantity of sludge of this type should be held in the primary system for its seeding value. Frequent cross-sectional samples of the sludge and sludge liquors in the primary system should be taken as a guide to dictate the frequency and amount of required transfer to the secondary tanks.

The pH value of the ground garbage will probably be 6.0 or less, and lime should accordingly be added to maintain the digestion tanks at a pH value of 7.2 to 7.4.

The secondary digestion tank system should have a capacity of not less than 1 cu. ft. per capita and preferably more. Transfers of primary sludge to the secondary system should be regulated to avoid active gas production in this system, and separate meters should be installed to indicate the activity of gas production in the secondary system only. To avoid a heavy secondary liquor or considerable settlement in secondary liquor storage tanks, this gas production in the secondary system should not exceed 10 or 15 per cent of the total gas production from both tank systems. The secondary tanks also should be equipped with top and bottom jets or the equivalent, the top jets being supplied for emergency use only, and the bottom jets being used only prior to withdrawal of sludge to the sludge beds. No floating sludge should occur in the secondary tanks also should be containing the least amount of solids. This desired condition can easily be disturbed by an ill-advised transfer of primary sludge and an excessive gas activity.

The overflowing liquor from the secondary tank system should be delivered to a storage tank with a capacity sufficient to hold one day's supply and allow for an adequate area below the draw-off line to accommodate settling matter. This tank should be supplied with accessories to regulate the flow from the tank to the sewage influent at a uniform rate throughout the day. The settling solids are gray in color and comparatively granular and can be returned to the secondary tank system for further digestion or for combination with the digested sludge to be withdrawn to the sludge beds.

Careful operation of each stage of digestion is as imperative as proper design and proper facilities for each stage. Various designs for tank arrangement may obviously serve the same purpose, namely, segregation of the initial violent gas action with a gradual reduction in gas activity and a final quiescent settlement to produce an overflowing sludge liquor with a minimum of total solids and undigested volatile matter.

The fourth of these articles, appearing next month, will discuss municipal refuse as a fuel in the operation of an incinerator.

Steel Mines in City Streets

War Production Board's Conservation Division Asks Municipal Cooperation in Salvaging Street-Car Tracks

THERE are potential tanks lying in the avenues of America's towns and cities. And there are the makings of guns and planes and ships—enough to equip an army—imbedded in the streets, waiting to be dispatched to the blast furnaces.

This arsenal is represented by the miles of abandoned street-car rails to be found in practically every community of any size in the country. Literally hundreds of thousands of tons of precious scrap steel and other metals, urgently needed for war production, are contained in this mine which only today is being explored and worked to full capacity.

To municipalities everywhere in the country the government has issued the call to get after this scrap, get it out of the streets and into the mills where it can be made into the armaments that will smash the Axis. The blast furnaces and rolling mills are shattering all records in their fight to give us every pound of steel we need to build up an impregnable army. *But for every pound of ore that goes into the furnaces, there is needed a pound of scrap.*

Abandoned street-car rails will go far in solving the scrap shortage. The Conservation Division of the War Production Board has established a special unit to work with municipalities in rooting out this abandoned scrap, along with any other potential sources of scrap steel such as old bridges, unused buildings, broken-down trestles, and similar structures which have for years been community eyesores.

The Special Projects Section of the Division is only a few months old—it was established last March—but it already has hung up an enviable record. Salvaging abandoned street-car rails is but one of its interests. It has a record of 500,000 tons of rails to be salvaged. This is a substantial part of the nearly 3,000,000 tons of steel scrap the Section has listed in its actual working files. As for actual collections achieved, the Section has more than tripled its "take" in four months of operations. In March, it moved 530,000 tons of scrap from these special sources. By June, the material was moving at the rate of 167,000 tons a month. In four months, the Section had dispatched over 400,000 tons of previously untouched scrap into war production.

J. Widman Bertch, Chief of the Section, speaks of this progress record as "just a start":

> There are millions of tons of vitally needed scrap steel and other metals lying in American communities which are not touched by the usual salvage machinery. It is up to us to get at this stockpile and keep it moving into the steel furnaces and rolling mills. Today we are harvesting this scrap at the rate of over 2,000,000 tons annually. When the program really gets into its stride, I see no reason why we can't add substantially to these tonnages. But attainment of our goal rests on the cooperation of every municipal official in the country. Their patriotic assistance is imperative if we are to locate every pound of this scrap and get it into war production in the shortest possible time.

Legal and Financial Aid

The Special Projects Section is well-equipped to work with community officials in getting rails and other kinds of scrap into war production. Operatives of the Section oftentimes have to be combination lawyers-detectives-sheriffs in order to literally uproot dormant scrap from resting places of many year's standing. The reason for this is that very often the potential scrap is tied up in legal tangles such as bankruptcy proceedings, receivership, conflicting claims of ownership, and other problems.

There are several ways around these obstacles. When, as is frequently the case, the revenue obtained from salvage of the rails is not sufficient to pay for its removal and the repaving of the streets, the Section enlists the aid of Work Projects Administration local authorities. This provides a practical solution to the financial problem.

Before this can be done, it is obvious that legal clearance has to be obtained, franchise rights looked into, and ownership title cleared. The most common approach is for the city to take over title to the rails and agree to be sponsor for the WPA project. In all this, the Special Projects Section is prepared to act as intermediary in ironing out whatever rough spots might develop. Not a small problem is that of getting the officials involved to agree on the method of removing the tracks, and on timing of the removal operations to keep inter

Grader tearing loose the paving brick between the rails

Showing how the same equipment loosens the rails from the road bed

ference with traffic and commercial life at a minimum.

Another approach to the same problem is the transfer of title to the rails to the Metals Reserve Company, a subsidiary of the Reconstruction Finance Corporation. Under this plan, the War Production Board becomes the sponsor of the project, and part of its share of the removal cost is covered by sale of the salvaged metal through the Metals Reserve Company. If there is a contractural obligation on the part of the local transit company to remove the rails, adjustments are made by the War Production Board to handle the situation.

Frequently, a franchise is involved and the Special Projects Section must select one of several possible approaches in order to take care of the various interests concerned. The most common solution is conveyance of the title to the Metals Reserves Company.

In the event that a city decides to remove the rails itself or to offer a contract to a commercial firm to do the job, it can do so as long as the scrap gets to the place where it is needed. If the city needs assistance on such an undertaking, the Special Projects Section is ready to help in every way possible. Plans are now in the making to cope with the financial problems involved under such a plan.

When Tracks Are Needed by War Workers

The question often arises as to whether rail lines might still be useful in moving war workers. In such instances, the Office of Defense Transportation is brought into the picture to make the final reckoning. In Baltimore, for example, four stretches of street-car tracks marked for the wrecker were scratched off the list after the ODT ruled they were needed to facilitate transportation of shipyard workers.

Once the rails are removed, they are dispatched with the utmost speed to steel mills facing serious scrap shortages. Payments are at the regular market price.

Finding abandoned rails is not quite the traditional needle-in-the-haystack problem. There are 25 branch offices scattered throughout the country which continually are on the lookout for potential "special projects." But in addition to these, the Section maintains contact with state highway and utility commissions, chambers of commerce, the American Association of Railroads, government bodies such as the Interstate Commerce Commission, and the like, to learn of new scrap sources as they develop. The Forestry Service often tips off the Section on the location of abandoned mines and logging railroads. Here again, the Section attempts to find ways to solve the financial problems involved.

How the Scrap Rails Are Used

Once the scrap rails are taken over, they quickly go into war production. Rail scrap is particularly desirable because it can be used directly in electric furnaces for making the highest grade of steel. Even in open-hearth furnaces, a certain amount of this valuable heavy scrap must be mixed with lighter scrap in the charging boxes. At present there is a serious shortage of heavy steel scrap.

In some cases, the steel is simply re-rolled into other shapes such as reinforcing bars. In others, the rails may be of the type that is suitable for use "as is" on such things as engineering projects for the Army, Navy, or Maritime Commission.

Some Significant Projects

One of the biggest projects so far undertaken by the Section covers 102 municipalities in New Jersey. The project, expected to yield 60,000 tons of scrap steel, involves acquisition to title of 616 miles of abandoned street-car rails by the RFC from the Public Service Coordinated Transport. The rail lines are located in 11 different counties. Before the start of the project, complete surveys were made by the Section, maps were drafted, clearance was obtained. It is estimated this steel will be enough to meet the scrap requirements for making 120,000 2,000-pound aerial bombs, or over 58,000 37 mm anti-tank guns, or over 1,500 medium tanks, or 4,000 4-motor bombers, or a couple of battleships.

Abandoned railroad lines also are being torn up. Trackage which has already been moved into salvage by Special Projects activities involves: the Susequehanna and New York in Pennsylvania; the Fairport, Painesville, and Eastern in Ohio; and the New York, Westchester, and Boston in New York.

In Brooklyn, N. Y., a sizeable amount of scrap will be obtained when the Atlantic Avenue elevated is demolished. But before the project could get under way, the Special Projects Section undertook to obtain priorities for 220 tons of steel required for completion of a subway in the neighborhood that will absorb the traffic previously carried by the elevated. In terms of the over-all war program, the deal was a profitable one on the defense side of the ledger. For the 220 tons of steel, the government will get 9,000 tons of the highest grade steel scrap, ten miles (1,700 tons) of grade A re-laying rail and, just as a by-product, 250,000 pounds of critically needed copper.

The Section is ready for immediate action in any community in the country where potential sources of this "special" kind of scrap are uncovered. All that is necessary is a letter to the Washington office or to the nearest field offices.

"Service Stripes"

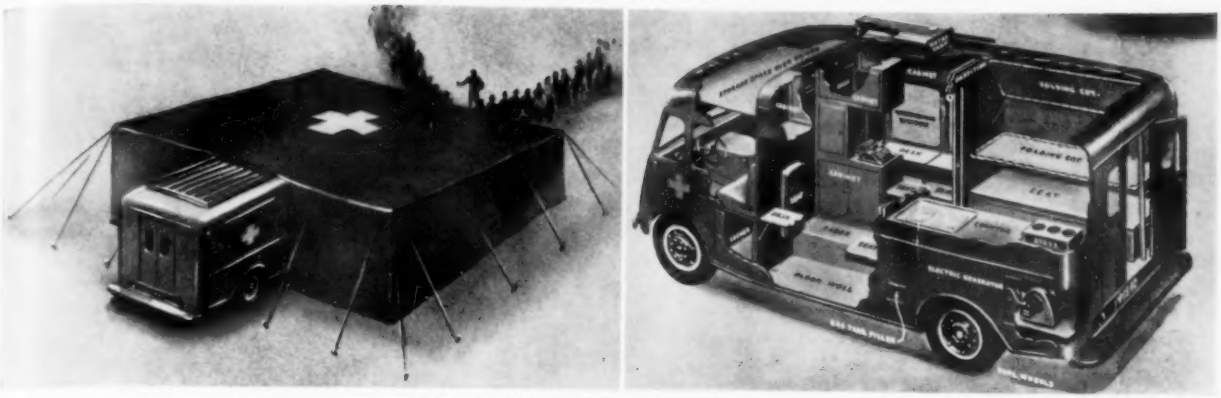
As to the community itself, it might draw a moral from this story of what happened in Saginaw, Mich. It seems that a field representative of the Section was engaged in a discussion with the city council on a proposed rail-removing project.

"But it will leave stripes right down one of our main streets," complained one of the members of the Council.

The field representative thought a minute, then replied: "All right. You can call them *service stripes*. You'll be proud to have them."

The project was promptly approved.

For other articles on Scrap Collection in this issue, see pages 41, 39, and 66.



RED CROSS DISASTER-RELIEF UNIT

Left—Artist's conception of unit with special tent equipment. Right—Showing interior arrangement of mobile canteen ambulance

Red Cross Chapters To Employ Mobile Disaster-Relief Units

For Effective Cooperation with Municipal Officials and Civil Defense Officers

THE latter half of June Red Cross chapters throughout the country began taking delivery of the first of some 500 mobile canteens, ambulances, and other automobile equipment for use in caring for civilian refugees in case of disaster, possible enemy attack, or other unforeseen events. With these deliveries, a further strengthening was seen in the plans which local municipal officials, civilian defense officers, and Red Cross chapters have made for the joint care of their populations in case of need.

These mobile canteens and disaster relief units are being built to order on special plans designated by David Jaques, American Red Cross disaster-relief specialist, after a careful study of wartime needs and experiences of civilians in England during the heavy bombings earlier in the war. Completely self-contained, they are equipped with kitchen facilities, including pots and pans, food storage bins, running water, cabinets and drawers for dishes and silverware, blizzard lanterns, first aid kits, stretchers, and other essential needs. Disaster-relief units are provided with sleeping accommodations for members of the crew, and also with a section fitted as an office with typewriters, desks, filing space, and interview windows.

Illustrating the wide variety of relief services which some of these units are in a position to render, several models make provision for the following: evacuation, rescue, highway first aid, ambulance, canteen, disaster registration, information, record keeping, and institute and personnel training. Some of the units are provided with special tent equipment which may be quickly set up and used as an emergency hospital for housing or giving other care to refugees.

AMERICAN RED CROSS PHOTOS

MOTOR CORPS OF SEVEN CITIES FED FROM MOBILE CANTEEN

Part of the 100 members of American Red Cross Motor Corps of seven cities, who came to Detroit to drive back to their home cities ambulances, mobile canteens, and mobile units, being fed by Detroit volunteer canteen workers from one of the mobile canteens

Red Cross chapters operating these units will make provision for crews, including drivers, canteen corps members, first aiders, and other personnel. The mobility of the units with their trained crews and complete equipment for all contingencies provides for a widespread effectiveness, and the variety of needs for which they have been designed will make possible a far greater degree of service and cooperation in meeting civilian needs should the occasion arise.

Forty-five of these units, ranging in price from approximately $1,600 to about $3,000, were delivered to Red Cross chapter representatives the latter part of June. These representatives, all of them members of Red Cross motor corps units, had come to Detroit especially to take delivery of the vehicles and drive them home. Since that time additional units have come from the assembly line and have been delivered to various communities in the East and Midwest. Many of the units have been donated to Red Cross chapters or the national Red Cross by churches, fraternal bodies, business and labor organizations, and other agencies.

Increasing Interest in Long-Term Programming

THE chart below shows at a glance the program of capital improvements projected for the next 6 years by the Brookline, Mass., Committee on Advanced Programming and Budgeting, in its Third Annual Report. Projects are submitted by department heads and others in authority. Those for all years but the current one are subject to review and revision when the budget is annually extended one year to replace the year elapsed.

Long-term capital budgets—differentiated from annual operating budgets of maintenance and operating expenses—schedule the construction of all improvements according to their relative need and the community's financial resources. The first such program known to have been adopted by any city was that of Kalamazoo, prepared about 1921. Since then, the practice has grown, and particularly emphasis on the importance of basing the program on a comprehensive city plan. Interest in programming has increased with the setting up of the Local Public Works Programming Office (successor to the Public Work Reserve) which is aiding localities to set up reserve shelves of needed public work to be constructed after the war. Among cities which have set up reserves are: Greenwood, N. C.; White Plains, Elmira, and New York, N. Y.; Benton Harbor, Mich.; and Macon, Ga.

SCHEDULE OF PUBLIC IMPROVEMENTS 1942-1947

	1942	1943	1944	1945	1946	1947	Future
GENERAL GOVERNMENT							
Voting Machines	900	19,100	20,000	20,000	20,000		
New Town Health Station	20,000						
Town Office Building				300,000			
Remodeling of Police Station Bldg. for general office space		65,000					
POLICE DEPARTMENT							
Police Station Southwest part of the Town							25,000
FIRE DEPARTMENT							
New Engine, replacing #5 Dunstan St.(54 yrs. old)	15,000						
New Engine, replacing #6 Hammond St.(21 yrs. old)*	15,000						
New Engine, replacing #7 Ash St.(19 yrs. old)					15,000		
New Ladder, replacing #2 Headquarters		22,000					
New Station #3 and #4 Coolidge Corner Land			32,500				
Building				86,000			
New Station #1 and #2 Washington Street Land					49,000		
Building						130,000	
Repair Shop						35,000	
New Hose: 4000 Ft. 2½ Inch	6,000						
2000 Ft. 3½ Inch	1,400						
600 Ft. 2½ Inch Booster	300						
HEALTH DEPARTMENT							
Nurses Home at Hospital							20,000
SANITATION DEPARTMENT							
Destructor Plant						290,000	
Sanitation Depot, Kent St.	*						50,000
HIGHWAY DEPARTMENT							
Enlargement Cypress St. Yard							40,000
New Curbs		5,000	5,000	5,000	5,000		
ENGINEERING DEPARTMENT							
Streets and Sewers							
New Betterment Streets		60,000	60,000	60,000	60,000	60,000	
Street Alterations, Channelizations, and pertinent work		15,000	50,000	50,000	10,000	10,000	50,000
Cypress St., Washington St. to Boylston St. Alteration and Widening		66,500					
Damages		32,000					
New Drains and Sewers	53,750	60,000	60,000	60,000	60,000	60,000	
New Trunk Drains and Sewers, M. F. A.		10,000	10,000	10,000	10,000	10,000	
Drain, Beverly Rd. Outlet			50,000				
Clyde St. Alteration & Widening Damages				50,000			
South St. Alteration & Widening				1,500			
Damages					40,000		
Heath St. Alteration & Widening					4,000		
West of Hammond Street						36,000	
Damages						50,000	
Chestnut Street Alteration and Widening							60,000
Damages							5,000
Goddard Avenue Alteration and Widening							100,000
Lee St. Alteration & Widening							100,000
Kilsyth Rd. Extension Construction and Widening							70,000
St. Paul St. Construction and Widening							146,000

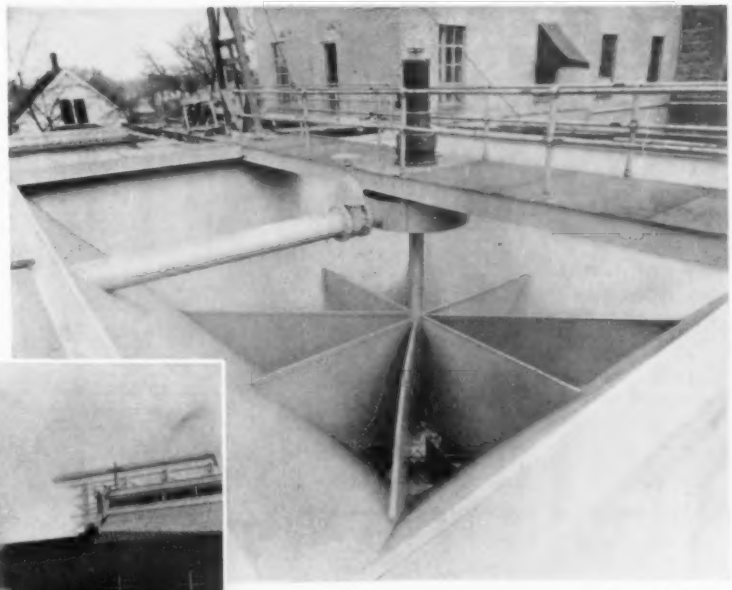
SCHEDULE OF PUBLIC IMPROVEMENTS 1942 - 1947 (Cont.)

	1942	1943	1944	1945	1946	1947	Future
Damages							4,000
EDUCATION DEPARTMENT							
High School, North Wing					433,180		
Baldwin School Addition						125,000	
Fire Alarm & Sprinklers							
Baldwin School		5,500					
High School, 1922 & 1932 Units		14,300					
Pierce Primary School			9,900				
Lincoln School				14,300			
Lawrence School					13,200		
New School rear Newton and Clyde Streets...Land		34,000					
Building							475,000
LIBRARY DEPARTMENT							
Putterham District Building				22,000			
Washington Square Building							35,000
Coolidge Corner Building							35,000
PARK & RECREATION DEPARTMENT							
Riverdale Parkway							
Relocation & Resurfacing	12,000						
Curbing	5,000						
Baker School, Purchase of land in rear for playground *		20,000					
Construction of Skating Rink			10,000				
Resurfacing Tennis Courts	3,500	3,500	3,500	3,500	3,500		
Old Longwood School Lot Grading*		2,500					
Baldwin School Playground (Purchased in 1941) Grading *			8,500				
Pierce School Playground Purchase of additional land							22,000
Grading							10,000
Aspinwall Hill Playground Purchase of land*						11,700	
Grading						7,500	
Devotion School Playground Bouve Lot, Purchase of land			8,150				
Bouve Lot, Grading area for Highway purposes			4,500				
Reconditioning proposed playground now used for highway purposes on Devotion Street			7,000				
Brookline Field Concrete Roller Skating Rink*							5,000
Clark Playground Construction of Wading Pool*	2,500						
Corey Hill Park, Addition Purchase of land						3,800	
Heath School District Playground Purchase of land							30,000
Bath House ($46,000 for River's School in Warrant)							
Addition to Swimming Pool				17,000			
CEMETERY (WALNUT HILL)							
Driveways, Filling, etc.	1,500	1,500	1,500	1,500	1,500	1,500	
Resurfacing & Drainage	2,000	2,000					
WATER DEPARTMENT							
New High Service Sub Station Pumping Unit	3,500						
New Mains and Services		35,000	40,000	40,000	40,000	40,000	
Addition to High Service Pumping Station				60,000			
Mains: Corey Hill				8,000			
South Street			11,500				
Overland Road					4,600		
Arlington Road		15,000					
New Tank, High Service							130,000
Mains, Services, Meters	29,150	40,000	40,000	40,000	40,000		
TOTALS	$146,050	$347,900	$432,050	$859,800	$809,980	$815,200	$1,465,000

*Included in 1942 Town Warrant

How Woodstock, Ill., Met Its Hard Water Problem

Successful Developments of a Modern Treating Plant Serving a Community of 5,500



Permutit Photos

Above—How the precipitator looks when empty. The agitator blades may be seen at the base of the precipitator. Chemically treated water proceeds at a slow rate through the baffled openings with the precipitate forming a sludge blanket which acts in the form of a filtering medium. Clear water may be drawn off through the intake at the center

Left—A general view of the Woodstock treating plant showing the reconstructed clarifying basins fitted with Spaulding precipitators

By LESTER E. SWAIN
City Engineer

WOODSTOCK, ILL., typical of many towns in the Middle West, has had, for many years, an aggravating water-supply problem. This supply, furnished by two deep wells constructed in 1919, was very hard, having a total hardness of about 380 ppm and iron content of about 0.8 ppm.

For several years the city council recognized the importance of this situation with its deterring effect on the civic advance of the town, and its costliness and inconvenience to the consumers; and in 1934 they constructed the first improvement to meet this situation. This consisted of a cold-lime treatment plant of the conventional type designed to handle 1,000,000 gallons of water daily.

The result of this construction was a distinct improvement in the water for the consumer. However, from a strictly technical angle, it left a great deal to be desired. Our consumption of the untreated water at that time averaged about 700,000 gallons per day, so that there was very little margin of growth allowed in the plant design. It was necessary to backwash the filters twice each day, and there was also a noticeable deposit of lime in the mains.

As might be expected, the improved water made it more popular to both domestic and industrial consumers, and before long the demand had reached the amount of 2,000,000 gallons per day. This overloaded condition made the operation of the plant very expensive and resulted in an excess of water being lost because of backwashing the filters. An additional well, incidentally, was required to meet this increased demand.

Greater Capacity Needed

To meet the growing need, we decided to investigate how we might increase most economically the softening capacity of the plant.

After studying several alternatives, it was discovered that we could triple the original capacity of the plant by converting the existing settling basins to Spaulding Precipitators manufactured by the Permutit Co., New York. This type of equipment was originally developed by C. H. Spaulding, formerly General Superintendent of the City Water, Light, and Power Department at Springfield, Ill. By a unique and resourceful design, Mr. Spaulding has been able to clarify the treated water by allowing it to flow upward through a chamber of increasing cross-section. This flow is gentle enough to create a suspended sludge-blanket through which the water will pass before proceeding to the filter beds. The sludge blanket encourages the formation of flow and gives the water a preliminary filtering.

Existing Plant

Inasmuch as we could fit this equipment into the existing clarifiers, we did not have to increase the ground space of the plant. The design ultimately selected enabled us to increase the capacity of the plant from 1,000,000 to 3,000,000 gallons per day—sufficient to take care of future demands 50 per cent greater than present requirements.

The conversion of the old settling basins—two in number and square in shape—was accomplished by installing central compartments with sloping sides and by equipping them with the necessary agitators, baffles, and other appurtenances. This conversion, made in July 1941, was carried out on one basin at a time so that the soft water service was not interrupted.

Operation of Precipitators

In operation, the raw water and the lime coagulant are admitted to the outer compartment of each precipitator. In this compartment, paddles, driven by a motor acting through a reducing gear and mounted on top of the precipitator, intimately mix the chemicals with the water and with previously formed suspended sludge.

From this lower mixing compartment the treated water passes into the inner compartment where it is filtered upward through a suspended sludge blanket. The walls of this compartment slope inward from top to bottom so that the upper part of the compartment is much larger than the bottom.

Maintaining Sludge Blanket Height

Since the rate of flow is, by design, slow, the sludge blanket settles to a well-established depth below the surface allowing a relatively clear effluent to proceed to the filters. The increasing cross-sectional area of the inner compartment, slowing down the upward velocity of the rising water, materially assists in retarding the flow to the point where it is unable to lift the sludge particles.

We are able to maintain the height of the sludge blanket at the desired level by bleeding off sludge at the same rate that new sludge is formed. The continuance of the sloping sides above this plane constitutes a large factor of safety against excessive rise of the sludge blanket. Due to the intimate contact of the solid particles with the treated water, super-saturation and after-reactions are eliminated. A further advantage of this suspension of the sludge is that it utilizes completely the lime-suspension which is fed to the water. In the older type of settling basin, a portion of the lime-suspension settled out in the sludge before it had a chance to react with the hardness of the water.

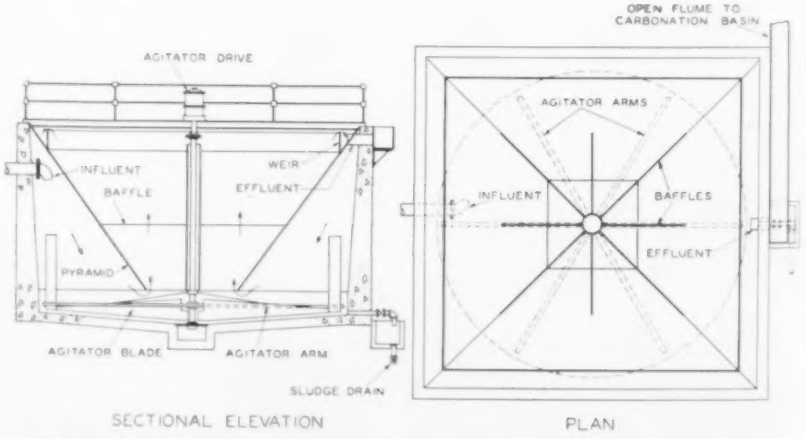
The efficiency of the remodeled plant has been gratifying. The two precipitators, which, as stated, occupy no more space than the original settling basins before conversion, soften 2,000,000 gallons of water per day, and yet the filters require only one backwashing per 24 hours, whereas in the old plant, when handling only one-third this amount of water, two backwashings of the filters in 24 hours were required. The total hardness has been reduced from 380 to around 85 ppm. Lime deposits in the pipe have been eliminated, and the water is very satisfactory from the standpoint of pH control. This plant should give Woodstock highly efficient water treatment for many years.

Future Improvements

Future changes in the water system will consist of improvements in the distribution system by installing additional and larger mains and the construction of a new elevated storage tank near the pumping station so that water can be pumped at a lower rate during the day and early evening with an increase in rate in the late evening and early morning hours which constitute the off-peak period for the city's power plant.

AUTHOR'S NOTE:

As the changes described in this article were made before the writer became City Engineer of Woodstock, credit for the improvement should go to C. K. Austin who is in charge of Power, Light, and Water and who prepared the plans and specifications. Ray H. Corr is Superintendent of Streets, Water, and Sewers for the city.



The plan and elevation showing how these Spaulding precipitators were fitted to the existing concrete clarifying basins at the Woodstock Treating Plant

The City Clerk's Job

IV—Filing and Indexing Official Documents

Here is the fourth installment of The American City's *excerpts from the Manual for City and Village Clerks, recently published by the League of Wisconsin Municipalities.*

As pointed out in the June issue:

A practical manual for city and village clerks is of special value in the present war emergency as offering ideas which may save the time or increase the efficiency of experienced men, and more especially as an aid to new clerks who are replacing men who have gone into wartime service.

THE filing of papers which pertain to council proceedings should receive careful consideration from the clerk. Other papers and records which are retained by the clerk, such as general correspondence, insurance policies, etc., should be kept in separate files and not mingled in any way with reports, communications, contracts, etc., which come before the council. If all the papers which relate to council proceedings, even though only received and filed, are adequately identified in the minutes by a numbering system, and the minutes are well indexed, one can easily find the papers wanted in orderly files.

Use of File Numbers

Alphabetical schemes are not adapted to filing these documents, but a numerical system such as is explained herewith is preferred. File numbers should be assigned to items at the time the papers first come before the council. Every separate item of business should have its own number. Papers on the same subject would have the same file number and will be filed together, but may be individualized by a sub-number if desired. For example, a resolution introduced calling for the extension of a sewer on Blank street might receive the file number 4274. At the next council meeting a petition requesting the extension of the sewer on Blank street is received. This relates to the same subject as the resolution, and is given the same file number. To differentiate between the documents, the clerk could assign sub-numbers, thus making the file number of the resolution 4274-1 and that of the petition 4274-2.

Probably the best time to assign numbers is during the preparation of the minutes at which time each item and the council action thereon can be scrutinized, the index searched for a possible record of previous consideration and file number, and the file number of each paper entered in the minutes and marked in a uniform location on each item. If numbers are not assigned until final action by the council, the danger of loss or oversight is incurred, and it is then difficult to trace back to the beginning.

All papers under a single file number should be retained together in the files, preferably in folders in drawers holding legal-sized folders. Since most documents are single paged, it usually will be satisfactory to file papers making up 50 or 100 file numbers in each folder, which is tabbed to show the numbers. Papers should be filed unfolded unless they are larger than legal size. Tabs with adequate markings facilitate ease in finding.

Occasionally a single file number will include a large number of items which may be accumulated over a period of time, and in such cases it may be necessary to provide separate folders or packets, properly numbered, for the orderly preservation of the records. When an individual file is created for any number, an 8½ x 11-inch sheet should be inserted in its place in the regular numerical file marked "see separate file number ."

When a system of individual consecutive file numbers is used everything is placed in order and the files can be easily checked to see that they are complete. By using the indexed minutes one can easily bring together records which are wanted in a minimum of time.

The numbering system may be consecutive from year to year or may have the year designated by pre-fixing the year to the file number, such as 41-279, 42-360, etc., for items 279 in 1941 and 360 in 1942. For the majority of cities a simple consecutive filing number continued from year to year will be satisfactory, since it is a simple system and does not run into high numbers.

Filing Pending Matters

Measures or documents referred by the council to a committee, officer, or department for consideration or report should not be filed after the file number has been assigned, but temporarily should be sorted into folders or filing drawers labeled with the respective name of the committee or department. After these documents are considered and disposed of they should be filed in the regular manner by the clerk.

Removing Filed Material

Papers should never be removed from the files even for temporary use or for use by committees or officials without inserting in their place a receipt slip or card showing the number and title of the item, date removed, and receipt of the person who has them. No one but the clerk or his office force should have access to the files. Original documents, especially where they contain signatures, should not be removed from the clerk's office except where necessary, or for court cases where they are needed as evidence. Since the clerk is responsible for their safekeeping, he is subject [in Wisconsin] to a penalty of from $25 to $2,000 if necessary papers or records are missing.

Other Filing Systems

In case a file number system of filing is not used, the documents of business presented to the council must be filed in some other manner which will make them available and which also is adaptable to indexing. Some clerks keep all documents finally disposed of at each meeting in a separate folder or envelope, labeled to show the date of the meeting. These envelopes or folders are filed in drawers or shelves in chronological order. Alphabetical filing systems for filing miscellaneous records might be used, but generally have not proved satisfactory.

Indexing Council Minutes

Some method of indexing council minutes sould be followed to enable the clerk to find quickly any record of council action. The system used should point out the thing sought by plain and ordinary terms familiar to all, and should not depend upon the memory of one person. If one can not find what is wanted, it may in effect be concealed by the assumption that it is not there.

A properly kept minutes index makes unnecessary other indexes of ordinances, resolutions, etc. If the document files contain nothing except items which were before the council, and if each item regardless of importance is noted in the minutes; if the file numbering is systematic and the files are kept in the order of the numbering sys-

tem, and if the minutes and index thereto carry the number with each item referred to, then the index to the minutes enables a searcher to find any item in either the minute book or files, or both. This is the result which should be expected of any good indexing system.

In larger communities it may be desirable to have a separate Public Works index, particularly for use by the engineering and public works departments. This index follows the same general plan as the minutes index. Separate cards are made out for each street and alley for the following headings:

Grading—paving
Curb and gutter
Sidewalks
Sanitary sewers
Storm sewers
Water mains

A tabbed card is labeled and arranged alphabetically for each street and alley, and all cards for each street or alley are filed under the respective card. Thus the cards for each street contain a complete record of all public works for that street. All of this information would be obtainable from a properly maintained minutes index, but a separate public works index makes it much easier to find.

Ordinance Index

The ordinance book may need a separate index because the minutes index is rather cumbersome for use in counter service to the general public. The separate indexing of ordinances should follow the same general plan as the minutes index, following the same list of subject headings and using the same type of index card.

Form of Index of Minutes

While numerous forms are used in indexing council minutes, undoubtedly the most practicable and simple is the card index form which is hereinafter explained. This system results in a continuous index which in addition to the subject includes a notation of the action taken, date, and the file number or page in the journal.

Under this system 5 x 8-inch cards printed identically on both sides are used, an example of which follows:

Entries should be made on the index cards from the journal of council proceedings as soon as the minutes of the council meeting are prepared. Entries are continuous from year to year, and annual indexes are thereby unnecessary. When one side of the card is filled, the reverse side is used, and additional cards begin when the old cards are filled.

In larger cities where there are a considerable number of council actions to record each year, separate index cards may be added under each heading for each year, using various colors to distinguish years. Then if the printed council minutes are bound in annual volumes, the cards for the year can be used to make up the annual printed index. Cards for all years are retained together under their subject headings in the card index files.

Index Headings and Cards

It is impossible to develop a list of subject headings to be followed in making out cards for the minute index which would apply to all cities. However, certain headings are used repeatedly and a list may be secured from the headquarters of the League of Wisconsin Municipalities which will serve as a sample of what such headings might include. Every index must use the terminology of the council action or of the matter indexed. Definite subject headings should be adopted for particular matters and used consistently whenever the same subjects are indexed.

Cross references noted on the index cards are usually preferable to overcomplex duplication of subject headings, for where too many subjects are used in many instances there is a risk of overlooking one of these when recording subsequent actions. Instead the key word in most common usage should be selected and the item indexed accordingly. For example a section on plats could be entered under:

1. Platting
2. Subdivisions
3. Land subdivision
4. Streets
5. Planning
6. City planning
7. Common council
8. City plan commission, etc.

So many entries are obviously not needed. If platting is the term most commonly used, then it should be entered under that heading if there will be enough entries to warrant using that key word. If not, it might be entered under "Planning" with another entry "Platting—see Planning."

If the term "Platting" is used in the index it would be possible to use references as follows:

"Subdivisions—see Platting"
"Land Subdivision—see Platting"

Cross-references of this type should be used for all the common terms.

Experience has shown that it is better to use a broad subject heading, rather than many specific subject headings. For example, the heading "Animals" or "Livestock" should be used instead of indexing items separately under "Dogs," "Horses," "Mules," "Donkeys," "Cows," "Goats," "Cats," "Hogs," "Rabbits," "Guinea Pigs," etc. Where deemed necessary there can be a cross-reference, such as "Dogs—see Animals."

The fact that the council and plan commission pass upon plats does not necessarily mean that every matter coming before these two bodies must be so entered in the index. Particularly in the case of the council this would result in a long list of entries under "Council."

Likewise, the fact that a plat deals with the laying out of a street does not necessitate an entry under "Streets."

Entries under "City" or "Village" in the index should be avoided, but instead the next key word should be used, such as "Plan Commission" instead of "City Plan Commission."

While duplicate entries should be avoided so far as possible, it would probably be desirable to list under the heading "Licenses" all types of municipal licenses, as well as entering each such item under the proper key word.

Duplicate entries will be necessary in some instances, such as a case where the council specially appropriated money for the installation of a certain street light by transferring money from the contingent fund, by indexing the action both under "Appropriations" and "Street Lighting."

Since the card index is to be cumulative and permanent, the cards should be of durable material and entries made in a permanent ink. A small filing case with several draws designed to fit the size card used will usually be sufficient and this can be handily located in the clerk's office. Tabbed separators are desirable to separate the index cards alphabetically or by subject, and thus facilitate the location of a particular subject.

File No.	Subject Matter	Introduction	ACTION OF COMMON COUNCIL (NUMBERS REFER TO PAGE OF COUNCIL PROCEEDINGS)						
			Referred to Committee	Reported Back	Adopted as Introduced	Adopted as Amended	Indefinitely Postponed	Placed on File	Sundry Actions Dates

Salvaging Scrap Mechanically from Incinerator Residue

Pittsburgh, Pa., Separates Scrap Metal by Screening

THE city of Pittsburgh, located in the heart of the steel-producing area, has had ample reason to be impressed with the need for reclaiming scrap steel. The growing number of open-hearth furnaces, shut down because of lack of material to feed them have been constant reminders that every source of scrap metal should be exploited to its fullest extent.

For some time in the past, the department of Public Works has been salvaging metal from incinerator residue by the use of hand-labor. However, D. C. Agar, managing engineer for the Bureau of City Refuse, was not satisfied with the hand-picking process. He noted that less than 10 per cent of the metal could be picked profitably. Accordingly, from observations that he made in the by-product coke oven industry, he put into use a Robbins vibrating, single-deck screen of the "Gyrex" type, suspended by cables. This screen is 48 inches in width by 102 inches in length. It is constructed of 5/8-inch rods and has clear openings of 2 inches by 4 inches. The screen contains two cross barriers about two inches in height to aid in tumbling the cans and in reducing the surface ash as well as ash that might be within the containers. The screen is vibrated by the action of a 3-hp motor powered through a V-belt drive.

Handles Wet Material

"I will admit," stated Mr. Agar, "having certain misgivings when this screen first went into operation, in view of the physical condition of the material to be screened. The residue had a moisture content of approximately 35 per cent and it appeared too sticky to handle. However, the screen took hold of the material and worried it through without any apparent effort. In fact, the original screen openings were twice their present area. The ease with which the screen handled this heterogeneous material convinced us that we could use the smaller opening."

The recoverable metal content of the residue averages 14 per cent by weight and 50 per cent by volume. The residue is drained on the inclined portion of the conveyor system leading to the ash bin; the maximum rate of residue flow is 400 tons per day.

Two Laborers Required

The extremely heterogeneous character of the residue made it necessary to have the screen attended by two laborers at all times to remove large pieces of clinker that were not broken up by the heavy rod used, as well as other matter, such as paper and rags, which would decrease the value of the scrap metal.

This screen was installed on March 2, 1942 and was immediately successful. A check made by the department on June 1 showed that it had delivered 2,211 tons of scrap metal having a free ash content of less than 5 per cent. Department heads have expressed the opinion that the material is superior to scrap picked by hand from the conveyors or from existing dumps.

"We have been able to dispose of this scrap profitably," stated Mr. Agar, "thereby being able to assist in the drive for scrap metal without producing a drain on the operating costs of the department. In addition, we have derived a material benefit from the greatly improved land-fill conditions resulting from the removal of such ma-

This Robbins vibrating screen, powered with a 3-hp motor, has been able to separate easily the scrap metal from the ash in the residue despite a high moisture content

terial as tin cans from the residue. This has reduced the volume to be disposed of and also has made a more stable fill."

Pittsburgh's Incinerator

Pittsburgh's incinerator consists of four crane-serviced, 150-ton Nichols Engineering and Research Corp. furnaces operating at an average temperature of approximately 1800° F. for 24 hours per day, six days per week. It is equipped with a Beaumont-Birch scraper-conveyor which discharges the burning residue into water-filled troughs approximately four feet deep, carrying it thereafter to an overhead ash

Pittsburgh's salvaged scrap metal goes directly to the steel mills

bin, and draining it in the process. The screen was manufactured by the Robins Conveying Belt Co.

60 Per Cent Rubbish 40 Per Cent Garbage

Refuse to be incinerated here consists of about 60 per cent rubbish and 40 per cent garbage. The rubbish consists of about 5 per cent tin cans, baling wire, metal toys, and miscellaneous household metal. It is expected that the drive to collect tin cans will reduce the volume of this type of salvage. However, the screening arrangement will make possible the reclaiming of those cans that have not been cleaned and processed in accordance with the strict methods that the detinning establishments require.

The Citizen Also Fights the War

By Colonel R. Ernest Dupay, G. S. C., and Lieutenant Hodding Carter, F. A.

WHY is the civilian so important in defense, and defense so important to the civilian? The answer is simpler than its application.

The basic mission in war is to destroy the enemy's means and will to win. It was once necessary first to destroy or disperse the armed forces to accomplish this mission. Now this technique is outmoded. Within reach of aircraft and fast-moving mechanized units lie the behind-the-lines nerve centers of population, production, supply, and administration. Their accessibility means that a new battle force, the civilian population, is directly and immediately involved in totalitarian warfare. Though its army remains physically intact, a nation's means and will to win can be destroyed by the reduction of its supply centers, its productive capacity, and the morale of its citizens.

Attack and Counter-Attack

This kind of warfare has grave meaning for the people of the United States. We are participating in a world conflict. Our industries are supplying guns and planes and ships for ourselves and our allies. Our forces are trading blows with Japan and Germany. We have shot, been shot at, have suffered heavy casualties. This war in which we are thus engaged places every American civilian on the battle line, subject to three methods of attack:

1. Militarily, by attack or invasion from the air or from the sea, directly upon our own coasts, or indirectly upon the coasts of our neighbors

2. Psychologically, by propaganda

3. By sabotage, which may precede or accompany each of the other methods

The civilian's defense is the organization for his own protection. His counter-attack is production and the maintenance of a national morale that will outlast the enemy's. In his sector, the civilian defender must stand squarely on his own feet. For, except to provide the combat forces—fighter planes, anti-aircraft batteries, and coast artillery—necessary for the military defense of national areas under attack, the armed forces cannot be concerned with civilian protection. Their war mission is to seek out and destroy the enemy's armed froces, to eliminate his will to win. Diversion of the federal forces to civilian centers for general defense purposes only fritters away our armed strength and thereby assists the enemy.

Defense against air raids, maintenance of production and morale, integration of collective effort—these are general phrases. The civilian provides their specific application in hundreds of purposeful directions. Only a limited number of the civilian population may even participate in air raid defense. That's just one job; and even in war, air raid protection will not be a continuously sustained activity. Nor will employment in war industry absorb even a majority of the civilians willing to give their time to aid in national defense. Few of us will be morale builders as such. Yet every civilian past childhood—and even every child—has his contribution to make to defense. It comes sometimes in indirect effort, in the simple determination to be a good citizen in time of national bewilderment and peril; in participating in health and welfare services that contribute so greatly to morale; in educational interest, in nutritional aid for undernourished millions, in assisting in recreational programs for soldiers, the workers in war industry, the unnoticed kids across the tracks. The great challenge of defense to the civilian is that his effort will have not only an immediate result, but also a strong impact upon the distant peace. This can be best understood if we interpret civilian defense activities as being both part of our present goal—destruction of our enemies—and a significant contribution to the unity and purposefulness of the United States in a world at peace.

From the book "Civilian Defense of the United States." Farrar & Rinehart, Inc., New York. See review on page 104 of the May issue of The American City.

It is not enough, in these times, simply to defend the sources from which spring our national character. A vigorous offensive on their behalf is indicated as never before. American citizens and American communities must feel the full impact of their strength—must see with crystal clearness that American organized effort for human betterment is an indispensable keystone supporting American democracy and American character.

James E. Almond.

Breckenridge, Minn., Builds Soil-Cement Streets

Thorough Testing and Engineering Pays Dividends in This Low-Cost Street Construction

PROBABLY the most important requirement for satisfactory low-cost street construction is the careful attention given to engineering design and testing. All too often this type of street construction has been performed without adequate and thorough preliminary investigation and subsequent supervision, with the result that the streets so constructed are actually more expensive and far less satisfactory than they would have been had they been built with the customary high-type of paving materials.

Breckenridge, a farming community with a population of close to 2,700, located at the western edge of Minnesota, is one town that did not make this mistake. This town recently completed approximately 47,500 sq. yds. of street improvements. In building these streets they first employed the services of an engineer and a competent testing laboratory to study the soils natural to that area. From the results of these studies, they arrived at very definite conclusions regarding the type of soil mixture to be used and the methods of processing.

Geological Studies

Breckenridge is located in the midst of the Fargo clay area. Geological studies have indicated that this clay was formed during the glacial age and that it lies on an old lake bed. Subsequent tests of the clay showed it to be both plastic and expansive and, as a result, very difficult to pulverize.

This indicated that the most economical and satisfactory construction procedure would be to excavate this clay and replace it with more suitable material. Further studies showed the desirability of using some type of soil-cement construction, with the use of selected aggregates. A gravel pit was discovered, located 16 miles from the point of construction, that met these requirements. Final design details included the addition of 4 per cent silt to the pit-run and gravel, together with 8 per cent Portland cement based on volumetric proportioning.

Road-Mix Process

A road-mix process appeared satisfactory for this work. The work had the advantage of being confined between curb and gutter construction performed prior to the stabilization program. The contractor excavated the existing clay and built the sub-grade to careful dimensions. He then spread the pit-run gravel in accordance with a calculated rate that would produce a finished depth of 6 inches. The final pulverized soil was then spread thinly on top of the gravel and disked into it before the addition of the Portland cement. He used the following equipment for this construction work: 2 cement trucks, 3 track-type tractors, 1 pulva-mixer tiller, 1 spring-tooth cultivator, 1 gang plow, 1 900-gal water distributor, 1 spike-tooth harrow, 1 broom drag, 1 nail drag, 1 tandem roller, 1 sheepsfoot roller, and 1 pneumatic roller.

The contract price for this work was 91 cents per sq. yd. This included grading, draining, importing material for treatment, processing and applying the bituminous seal-coating and, compared with the engineers' estimate of 88 cents, or only 4 per cent over the estimate, the total cost amounted to approximately $96,000.

Costs

Breaking down the contractors' figures, it cost at least 22 cents a sq. yd. to import the pit-run gravel and silt. The bituminous surfacing cost approximately 15 cents a sq. yd. This leaves a cost of about 54 cents a sq. yd. for grading, drainage, miscellaneous construction, and actual soil-cement processing. The excellent cooperation between the engineer, the contractor, and the city officials in regard to adherence to specifications and supervision of the work is largely responsible for the success of this project. Lium and Burdick of Grand Forks, N. Dak., were consulting engineers on this work, with Mr. Burdick being in direct charge. The Twin City Testing Laboratories, St. Paul, Minn., conducted the tests and designed the mix. Sarrington Construction Company of Lake Delton, Wisc., held the contract for the work. A. B. Wegner is street superintendent for the town.

A view of the low-cost street improvement utilizing carefully designed soil-cement construction at Breckenridge, Minn.

Controlling the Buffalo Nickel

By Frank M. Davis
City Comptroller, Buffalo, N. Y.

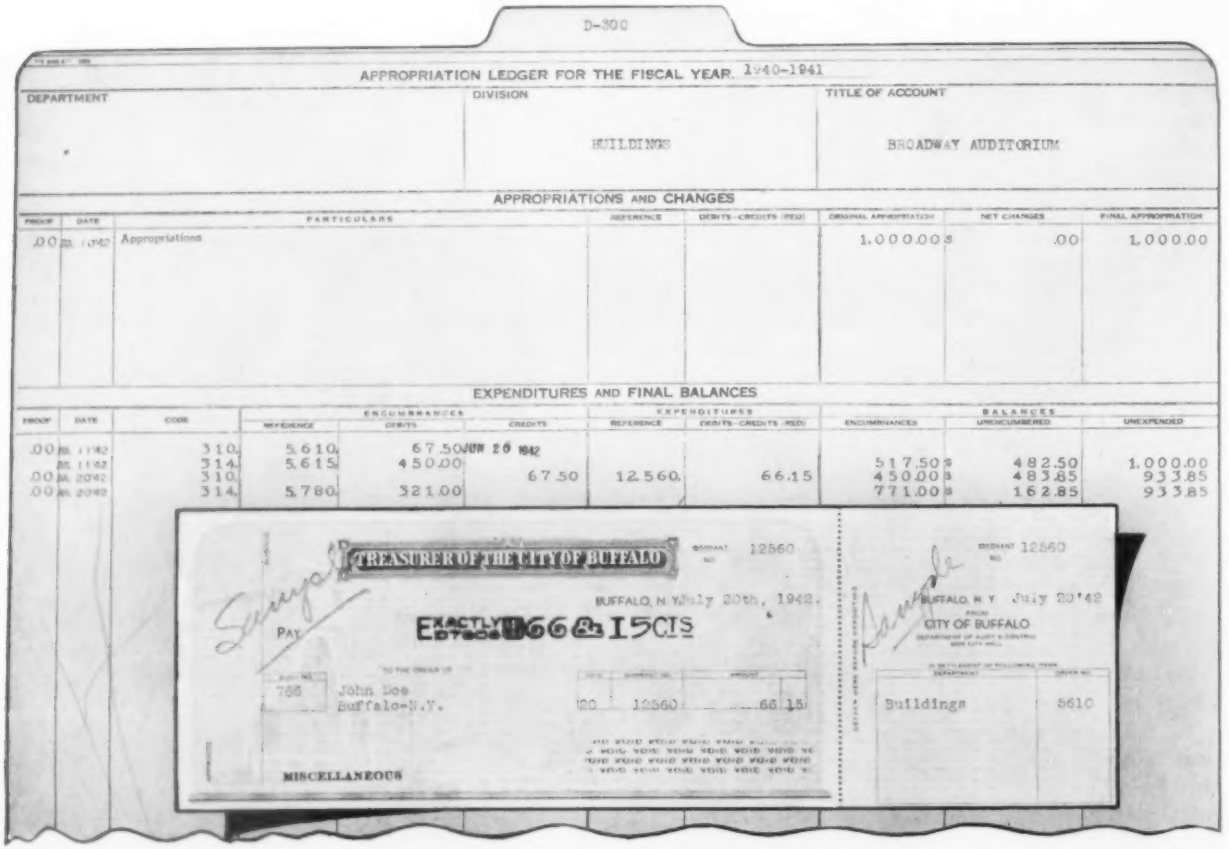
THIS is an outline of the principal office appliances used in collecting and posting revenues and in disbursing and accounting for the moneys of New York State's second largest city. Not as many of these essential mechanical office aids are used as might be, were their acquisition less difficult in these times. The assessor, for instance, would be using Addressograph machines and possibly bookkeeping machines to make the tax roll, individual ledger cards, and tax bills. The latest type of Addressograph equipment, employing the large nine-line VV plate, is now used to keep track of war bond buying by our employees under nine plans, thus avoiding considerable drudgery. Water billing also is done by Addressograph, and the 150,000 plates carrying all necessary data, together with the amount due, are kept up to date between billings by inspectors. Another application of this equipment will be mentioned later in this article.

All revenues are received by the City Treasurer and receipted by Burroughs receipting machines in each cashier's cage. The Treasurer also is Paymaster, using the Todd Protectograph and check signer in tandem. All of our semi-monthly pay checks are written on automatic Addressograph machines.

The Department of Audit and Control, consisting of the Division of Audit and the Division of Accounting, watches over the city's purchases and does the appropriation accounting. Posting to the appropriations ledger is now performed by a Monroe non-descriptive bookkeeping machine. Encumbrances were formerly posted by hand, and the ledger rarely balanced. It does now. No expenditures can be made and no obligations can be placed upon the city without the approval of the Comptroller.

Purchase Orders Preaudited

The using department makes out a requisition and sends it to the central purchase department, which makes out the purchase order in seven copies on an I.B.M. electrical typewriter, using continuous forms. This machine requires only a feather touch and makes sharp copies. For the last three years all but one of these copies has gone to the Division of Audit, which preaudits as to the proper account and observes charter requirements, such as the taking of bids. The order, or the contract, is then entered on the register form which has provision for the payment data. The



D-300

APPROPRIATION LEDGER FOR THE FISCAL YEAR 1940-1941

DEPARTMENT | DIVISION: BUILDINGS | TITLE OF ACCOUNT: BROADWAY AUDITORIUM

APPROPRIATIONS AND CHANGES

PROOF	DATE	PARTICULARS	REFERENCE	DEBITS-CREDITS (RED)	ORIGINAL APPROPRIATION	NET CHANGES	FINAL APPROPRIATION
.00	JL 1942	Appropriations			1,000.00	.00	1,000.00

EXPENDITURES AND FINAL BALANCES

PROOF	DATE	CODE	ENCUMBRANCES REFERENCE	ENCUMBRANCES DEBITS	ENCUMBRANCES CREDITS	EXPENDITURES REFERENCE	EXPENDITURES DEBITS-CREDITS (RED)	BALANCES ENCUMBRANCES	BALANCES UNENCUMBERED	BALANCES UNEXPENDED
.00	JL 1942	310	5610	67.50 JUN 26 1942				517.50	482.50	1,000.00
	JL 1942	314	5615	450.00				450.00	483.85	933.85
.00	JL 2042	310			67.50	12560	66.15	771.00	162.85	933.85
.00	JL 2042	314	5780	321.00						

TREASURER OF THE CITY OF BUFFALO — WARRANT NO 12560 — BUFFALO, N Y July 20th, 1942.

PAY EXACTLY SIXTY-SIX & 15 CTS

TO THE ORDER OF: 766 John Doe, Buffalo-N.Y.

DATE 7-20-42 | WARRANT NO. 12560 | AMOUNT 66.15

MISCELLANEOUS

WARRANT 12560 — BUFFALO, N Y July 20'42 — FROM CITY OF BUFFALO

IN SETTLEMENT OF FOLLOWING ITEMS

DEPARTMENT	ORDER NO.
Buildings	5610

Appropriations ledger posted with the check payment shown

purchase order is then sent to the Division of Accounting for encumbrance by the Monroe machine. This machine has four registers for storing additions and subtractions vertically, a crossfooter for expenditures, and a crossfooter for encumbrances. The two crossfooters furnish simplicity and speed over a machine having only one crossfooter which must be used alternately for expenditures and encumbrances. The machine also proves the accuracy of the pickup by printing "OO" at the beginning of the line. The fact that the operator was immediately pleased with the ease of operation and the visibility of the work will be recognized as a significant factor in the municipal use of this machine.

The vendor uses a standardized form of city invoice-voucher in duplicate, bearing an affidavit. This document comes to the Division of Audit and is entered in the register. It then goes to the Chief Inspector to be used in checking the quantity and quality of the products at the point of delivery. Upon approval, the invoice voucher is forwarded to the Division of Accounting. Here the warrant is written, with carbon paper between it and the daily register, by a Royal typewriter. Warrant and voucher go to the auditor for approval and are then mailed to the vendor. From the warrant register payments are posted to the appropriations ledger illustrated. The Monroe machine, which does the posting, provides at the end of the month summarized totals of unexpended balances and a statement of departmental standings which support the balance sheet. This information is of course vital to management control.

When Demobilization Day Comes

• • • —

IS your city planning now for post-war utilization of wartime community facilities?

This question is suggested by Planning Pamphlet No. 14, published last month by the National Planning Association.* Pointing out that to some extent strategical and other considerations have dictated the location of war plants in areas where little, if any, industrial activity previously had been located, the pamphlet says:

This has meant the construction not only of plant, but also of community facilities for the workers, such as houses, schools, streets, water systems, sewage systems, etc. . . .

Community Improvement in the Post-War Years

It may be that the location of this industrial plant will have frozen the population and configuration of our metropolitan communities for a generation or more. We may have as a long-run post-war endeavor the improvement of these communities. If so, we shall have to decide to what extent we can use the housing and community facilities constructed during the war period. Some of this construction is admittedly stop-gap, intended to meet an emergency demand quickly and with the least expenditure of materials. And all of it is far below the need for such facilities, either as annual additions or replacements.

Even so, we should probably plan to use these new facilities to the maximum for some years after the war, especially when in many respects they are superior to a part of the existing facilities.

Here likewise the Federal Government must face certain difficult choices. Much of the property will have been built at federal cost. Shall such housing, for example, be turned over to local management or sold? Shall the Federal Government assume any post-war obligation to support the community facilities constructed by it during the war? How shall the full utilization of these facilities be directed? . . .

Utilization of Government Land and Buildings

If at the conclusion of the war we proceed to demobilize a great portion of the armed forces, we shall face the problem of what to do with land and buildings acquired for the use of the Army and Navy. Contrary to the policy of the last war, the government this time has in most instances bought rather than leased land whenever the value of the improvements made upon it has equalled or exceeded the value of the land itself. . . .

It certainly is questionable whether the government could proceed as rapidly to dispose of land and buildings after the present war as it did following World War I. Past experience reveals that salvage return is very meager indeed. In consequence there may be real social gain if we are able to devise some peacetime use for our Army and Navy facilities. The first question would be whether we can find a desirable peacetime use for such land and buildings. It may be possible to use some for recreational purposes. It may be possible to use the buildings for peacetime training purposes, for care of chronic invalids, for convalescent camps. If we are to embark upon some program similar to that of the CCC during the 1930's, it may be possible to use the facilities in this effort. Some of the land we may want to retire permanently from its pre-war use. In any event, disposal of Army land must be a part of our long-range land-use program.

Broader Objectives

In the section of the pamphlet which discusses some of the broader aspects of our peacetime objectives, the National Planning Association says:

With intelligent private and public planning, we can dedicate our efforts to improving our standards of living and to making a new America. A major part of the satisfaction of individual needs will come from the activities of private enterprise. Government will seek to fill other needs and at the same time keep the private and public economy functioning at something like full utilization of our resources.

Internationally, we want a prosperous, peaceful world seeking goals similar to our own. We shall help other nations along the road, because we are wealthier and more experienced, because we prefer to share our wealth in raising the levels of living of other nations rather than to spend our resources on costly arms.

* See page 87 of this issue.

Airways and Airports of the Future

"We Must Take the Brakes Off the Airplane, and Give It the Gun"

THE war is demonstrating that an airplane is capable of doing harder work than we now conceive of, more kinds of work, and of doing it cheaply, efficiently, safely.

Pointing out this fact, Wolfgang Langewiesche* asks, in the July issue of *Common Sense*, "Will we have the gumption to take hold of it and use it?" Here are some significant excerpts from the author's answer:

"The time will come again when aviation will not seem worth the taxes and, even more so, the mental effort, the stirring of the bureaucratic mind that it will require. It will disturb real estate values; it will trouble the railroads. It will disturb the citizens' sleep. It will keep killing. There will always be good enough reasons to keep aviation progress nice, orderly —and slow. . . .

"Air freight is coming and is bound to make the airline industry bigger than we yet imagine. But we shall also have to make it possible for the small fellow, the man with one or two airplanes, to make a living by doing jobs. This means mostly credit, and the cutting of red tape. Some experts think that after the war there will be inter-city aerial taxicabs, waiting at airports ready to take you where you want to go, when you want to go, with no round trip charter required. But some wrong legislation could unintentionally kill that possibility.

"By and large, the airplane will find its own jobs, sell itself. But we shall have to give it airways. Too few Americans realize that we now have airways, and what they are: federal highways of the air, as it were; regularly spaced emergency fields strung out along a definite route which is marked by radio beams and at night by light beacons every few miles, and connected by a teletype system with weather service. These are *not* 'airlines' but are public highways, used by all flyers along with the airliners. They are a unique national asset, not duplicated anywhere in the world. But they are a vision of the twenties. It is time for a new vision. . . .

"We shall need an extension of the airways—also in the public sense—to the grass roots. That may mean low-cost 'fly ways' for bad weather extending to every town, with a landing strip every ten miles and perhaps regular sign posts, bearing numbers, marking the route. It will certainly mean a landing strip for every settlement that now rates a county road. And here is a thought that must be hammered home: airplanes do *not* need much space for landing and take-off. The airlines like big runways, for financial reasons: the bigger the airport, the heavier a load you can take off with a given engine. But no amount of runway extension will ever be enough: designers will take all the rope you give them, will always tend to make big, money-making airplanes just barely able to use whatever the average airport of the period is. On the other hand, airplane design can adapt itself easily to the airports that are available. For airplanes other than airliners, most airports are even now ridiculously big, and their pavement, for example, merely a nuisance. Ninety-five per cent of our airplanes can safely use a grassy landing strip, 2,000 feet long. In fact, if the approaches are clear, 1,000 feet is enough.

Mistakes That "City Fathers" Are Repeating

"But City Fathers keep building expensive airports that are too large, and then allow electric lines or tall trees to obstruct the approach. A 50-foot obstruction at the edge of the airport makes 500 feet of expensive runway useless. The essence of the airport problem is not size, but numbers; and they may be cheap. Aviation can adapt itself to tiny airports, but it can't do without vast numbers of them. Much like a telephone, an airport *here* is useless without another airport *there*.

"We shall also most urgently need an extension of the airways into the cities: landing strips downtown. The thought is so trite that one hesitates to give it: how you lose so much time between airport and town that the airplane's speed advantage is largely cancelled. Yet speech after speech is made, concerning the advancement of aviation, and nothing is done. It is futile to wait for the airplane that can land or take-off vertically, using rooftops; or for the airplane that can fold its wings and go to town under its own power. Those things are technically feasible and have been flown. But it will be a long, long time yet before they are practically serviceable and worth owning. And here, another thought for City Fathers. Not only can airplanes do with much less space than you have been led to believe; the new-fangled ones can also easily land cross-wind. That's why you no longer need a 'field,' but only a narrow strip. Finally, airplanes are now muffled, or can be: there is no longer an excuse for not having a landing strip, say 200 feet wide and 1,200 feet long, somewhere along the Manhattan waterfront, the Chicago lake front: San Francisco's Crissy Field, far from being obsolete, should not be abandoned. It is exactly the type we shall need! . . .

"We must take the brakes off the airplane, and give it the gun."

* "Speaking of airmen," *Common Sense* says, WOLFGANG LANGEWIESCHE is probably the most versatile U. S. flier not directly engaged in the war effort. Red-tape regulations classify him as "near-sighted" and he has come no closer to active service than giving advanced instruction at the Hawthorne School of Aeronautics, and last year flying a miniature dispatch plane for one of the Armies engaged in manoeuvers in the Carolinas. One of the dozen-odd licensed glider pilots of pre-war days, Langewiesche made the first transcontinental flight in a one-man seaplane. He is the author of the best popular book on flying, *I'll Take the High-Road*, and a technical manual on small planes.

"THEY ALSO SERVE"

By JOHN G. WINANT
Ambassador to Great Britain

THE integrity and strength of the community and the enlightened cooperation of its citizens have never been more important than now. . . . Let us continue our efforts for civic competence, decency, and effectiveness at home. All of us cannot march in the armed forces; but all of us can strengthen the nation by being alert, active citizens in our own communities.

It will not help in winning the war for local civic leaders and local civic organizations to curtail their efforts at this time. Continued support of civic progress is a protection for the present and a sound investment in the future.

—From the May 1942 issue of the *National Municipal Review*.

Local Government Is News—XVII

Behind the Public Report—the Internal Report

By PHILLIPS BRADLEY

FOR every hundred pages written about preparing reports for the citizen, there is scarcely a page on the kinds and uses of internal or departmental administrative reports. All too little attention has been paid to this aspect of public reporting—or to the training of departmental personnel in writing such reports.* These reports are none the less an essential factor in sound administration in any large department; they are, indeed, the grist out of which the reports which reach the public can be milled.

Organizing such reports and instructing staff workers in preparing them is, then, not only one of the most neglected but one of the most fertile fields of City Hall activity. What are some of the principles which should be applied to their construction? And how can departmental officials be more adequately trained in writing them?

Behind-the-Scenes Reports—What For?

First of all, it is important to know what purposes such reports are intended to serve. Departments will vary in their needs. Budget and other fiscal officers desire a critical appraisal of the requests which other departments make for appropriations or for modifications of existing allocations. Public works and similar agencies require clear-cut analyses of engineering and other data on which to base their construction programs or test the results of work already completed. Social service departments demand internal reports which are perhaps more descriptive and informal but not less precise. "Case-record" reporting should not escape the bounds of accuracy and critique which should govern all effective departmental self-appraisal and control.

Whatever the detail which goes into an internal report, it is an indispensable element in good municipal management. No departmental chief, at least in a sizeable department, can hope to keep personally in touch with the minutiae of day-to-day work—on which his record for efficiency and economy depend. His decisions on departmental policy must inevitably result from the information and advice of his subordinates. Most of these decisions will flow from the written reports which come to his desk—reports written by the men and women who will be immediately charged with carrying them out. No executive's "span of control" can possibly reach directly to the four corners of his department; he must delegate responsibility to the rank and file. With that responsibility goes a clear obligation to inform the chief so accurately and so incisively that decision will conform to the realities of the situation.

* The article by H. R. Sands, "Departmental Reporting for Cities and Counties," THE AMERICAN CITY (May, 1915) page 422, is still one of the most significant in this field.

The* AMERICAN CITY *is interested in collecting as much information as possible on the development of internal reporting in municipal departments. The* AMERICAN CITY *would appreciate reports on the experience of officials with training programs, rules, and standards used in different fields, and opinions on the best ways of improving departmental practice in this respect. Write the Editor, 470 Fourth Avenue, New York City.

Criteria of a Good Internal Report

The first consideration, then, in writing a departmental report is brevity. That charming bit of poetic satire, "Finnegan to Flannagan,"† puts the case as neatly as it does humorously. More recently, Prime Minister Churchill has urged the same point with vigor. "To do our work, we all have to read a mass of papers. Nearly all of them are too long. This wastes time, while energy has to be spent in looking for the essential points. Our aim should be—reports which set out the main points in short, crisp paragraphs."

He goes on to give some direct hints. "Let us have an end of such phrases as this: 'it is also of importance to bear in mind the following considerations,' or 'Consideration should be given to the possibility of carrying into effect.' Most of these woolly phrases are mere padding which can be left out altogether or replaced by a single word. Let us not shrink from a short, expressive phrase, even if it is conversational."

A second criterion for a good internal report is clarity. Someone has called such a report "a photograph of the mind of the writer at the time he writes." Clarity need not be sacrificed in achieving brevity; it is, in fact, often enhanced by a brevity which sharpens the perspective of the photograph. Orderly thinking distinguishes the essential from the unessential in a mass of detail to be digested for a superior officer. Some, no doubt, possess the trait instinctively; most public officials can acquire it with proper training and a little experience. In a department in which a large number and variety of internal reports are required, any training program should take account of the need for a review of the fundamentals of grammar and style. The complaint is heard too often that even our college graduates cannot write understandable English; a sound training program can turn out better products than the classroom—if it sets out to do so.

A third criterion is completeness. Here, too, nothing essential need be sacrificed to brevity. Unless the report includes all the relevant data and an analysis on which action can be intelligently based, it is useless. A good photograph results from considering many factors in the light and shadow, the distance and perspective, the character and shape of the subject. Just so, a good report should take these factors into account.

A fourth criterion is technical accuracy. There is no field of internal reporting where this is not indispensable. To attain it, experience is, of course, necessary. The junior officer should not be assigned a problem beyond the scope of his duties; within it, he can be held accountable for presenting a report which does not omit any essential information or analysis.

A final criterion is objectivity. Here, two aspects of reporting emerge. On the one hand, the reporting officer must maintain neutrality as to the issues underlying the report. He must not himself take sides on the question which gave rise to the necessity for a special report. Intra-departmental

† See text on page 74.

(*Concluded on page 74*)

Wash 'Em, Take Out the Ends, and Squash 'Em

The Present Status of the Humble Tin Can

• • • —

WITH the present drive and activity in the field of rubber salvage, how many of us realize that an equally critical situation exists regarding tin? Tin comes from the same place that rubber does; it has been shut off in almost exactly the same proportions; it is equally essential. The only basic difference between the tin and rubber is that we *can* make synthetic rubber, but we *cannot* make synthetic tin.

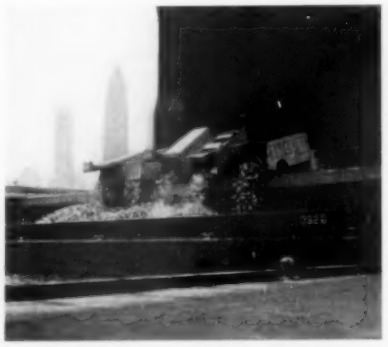
Tin is not a material that we can get along without. Discounting its use for tin cans, it is needed for the manufacture of machine tools and many other wartime essentials. Blood plasm is packed in tin containers. TNT is delivered to the armed forces in tin packages. Tin is a valuable alloying metal and an essential plating material. We can get a little—about 30 per cent of our needs—by difficult and expensive mining and transportation from Bolivia. The rest must be made up from our existing stockpiles. The biggest of these is the tin supply plated on food cans used by every householder.

There have been a number of metropolian areas selected by the General Salvage Section of the War Production Board so strategically located from the standpoint of volume of cans and location to detinning plants that it is feasible to gather and reclaim these cans. You will find a complete list of these cities on page 68 of this issue.

War Production Board officials feel that in these cities the sale of the tin cans will meet and liquidate the incurred collection costs. As a result, they are proceeding with plans to promote active campaigns in order to get these cans to the detinning plants. Much as our government needs the tin, it does not want to force any city to undertake a campaign that will be an economic drain on its resources.

Photos by Metal and Thermit Corp.

These two girls show how much space can be saved by thoroughly "squashing" the cans. Incidentally, there are as many cans in the small processed pile in the background on the left as there are in the large pile on the right



Five New York Department of Sanitation trucks load tin cans into a barge for shipment. In New York, this method is much more economical than rail shipments

To put it more plainly, failure of either the householders or the city officials in any of these cities to cooperate fully with the tin-can collection program must be considered actually more detrimental to our war effort than the acts of sabotage that would have been committed by the saboteurs recently captured by the FBI. Damage that these enemy agents would have done could be repaired. Tin on cans that are not collected is lost forever.

As a matter of fact, there is no reason not to collect cans in a number of other cities. The economic feasibility rests wholly and simply on the cost of collection within the city and the cost of transportation to the detinning plant. There are

Here is a method of loading tin cans that didn't work. This Joy snow-loader works fine when handling snow, but balks when it has to handle tin cans. Note also that the cans are poorly processed

two main companies doing this detinning. One is the Metal and Thermit Corp., 120 Broadway, New York; the other is the Vulcan Detinning Co., Sewaren, N. J.

As a basic collection principle, city officials should assure themselves that on one collection there will be enough tin cans to fill a standard flat-bottomed railroad gondola, unless the city is so located that it can ship by truck. Storing and rehandling increases the cost to a great extent. As a rule of thumb, tin-can collection is practical in most cities of 30,000

population or greater.

Any city not listed by the War Production board which feels that it has possibilities in the tin-can collection program should contact the Executive Secretary of the State Salvage Committee. He will, in turn, get in touch with one of the traveling representatives of the War Production Board who will have both the experience and information necessary to set up such a program.

Here is a way to NOT *collect tin cans. Mixing the processed and the unprocessed cans spoils the entire lot. It is better to do no work at all than to do it wrong*

It should be pointed out that this tin-can collection work should not be undertaken with the profit motive in mind. It entails added duties from the outset. Householders must go to additional work and bother to prepare the cans, city forces must take on more duties in order to gather the cans, and arrangements must be made to transport them. Costs must be watched to keep them within the price range that the detinning companies can pay.

What Is a "Processed Tin Can"?

"Wash 'em, take out the ends, and squash 'em" is the full history of a processed tin can. This work must be done by the householder before collection. It requires a certain amount of education by city officials, and its importance cannot be overemphasized. Dirty tin cans, cans still carrying paper labels, not only slow down the detinning process and often actually cause shutdowns, but they also result in the loss of valuable tin. Unless actually advised by the War Production Board, no city should attempt shipping cans that are not 100 per cent processed.

Cans that are not properly "squashed" are bulky and expensive to ship and, because of their

Here is what can be done when someone takes an interest in this tin can collection. Joseph T. Diorio, superintendent of this apartment house, stands beside the large collection of cans that have been processed and are ready for the detinners. Mr. Diorio furthermore takes the added personal interest of processing the cans that may have been sent down uncared for

increased volume, slow the process of detinning materially. Be sure to do a good job of flattening them.

Are All Cans Suitable?

All cans are not suitable. Do not attempt to ship oil cans, paint cans, beer cans with conical tops, varnish cans, floor polish cans, or cans that have been burned or incinerated. Do not under any condition ship cans that have been baled. The cans are "squashed" to save shipping space, but there must be enough of an opening left to allow the caustic, detinning solution to pass through the inner portion.

How Should They Be Collected?

Collection procedure depends strictly upon the operation of your garbage collection service and, as a result, must be worked out locally. However, fit the tin-can collection into the regular garbage collection work. Your people are familiar with it, they know when these collection days are, and they will more readily set cans out at the same time.

Above all, don't skimp on the collection. Nothing will discourage the entire tin-can collection work more than lackadaisical and indifferent collection. A householder goes to considerable work and trouble to prepare these cans and will be indignant with the whole program unles the collection service is prompt and thorough.

The kids and their mothers have to be sold on the value of salvaged cans in the war picture—like little Eddie Kelly from the upper East Side. His mother has sent him down to the Department of Sanitation's Section Headquarters with a carton of perfectly processed cans. The sign by the door says: "Toss Old Cans for Defense Use Here"

In some places, collections may be planned independently of garbage collections. Cans may be accumulated in baskets in schools, super-markets, Red Cross centers, and similar civic localities to be picked up by truck at suitable intervals.

How Should They Be Shipped?

The cans may be loaded into flat-bottomed open gondolas used by the railroad companies in shipping sand, gravel, or other similar loose material. They may be trucked if it appears more desirable. Railroad companies will charge you for a minimum of 15 tons on a car of this type whether it is loaded that heavily or not. You can get as high as 20 tons of processed cans on one of these cars if the cans are properly "squashed." Obviously you are penalized by a shipment of bulky cans. Don't bale them, but don't be afraid to smash them down.

What Has Been Done

Detinning operations have been going on for the past several months in certain of the large cities. There are two detinning plants in New Jersey, close to New York City;

there is one in South San Francisco, one near Pittsburgh, and one in East Chicago, Ind. Procedure has been developed in the various cities, and with this as a groundwork, government officials hope to expand the program and utilize the vast stockpile of irreplaceable tin.

Remember, it is not only the tin that is valuable, but the reclaimed steel also. The tin content of a can varies from 1 to 1½ per cent of the total weight. The rest is valuable steel that steel mills are anxious to get.

Remember again, that our source of tin has been lost just as surely as our source of rubber, that tin is equally essential, and that it, unlike rubber, cannot be made synthetically. Mark this down as another way that your city can participate in what we know more surely every day as total war.

The Tin Can Market

Detinning companies will buy your processed tin cans, f.o.b. their plant locations, at the prices listed below.

Metal and Thermit Corp., plants at Cartaret, N. J., and East Chicago, Ind. —$12 per ton, and South San Francisco, Calif., $10.

Vulcan Detinning Co., plant at Sewarren, N. J., $12 per ton; plant at Neville Island, Pa., $15 per ton.

WPB Plans Active Tin Can Drives Here

Alabama
- Birmingham
- Mobile
- Montgomery

Arizona
- Phoenix

Arkansas
- Little Rock

California
- Fresno
- Los Angeles
- Sacramento
- San Diego
- San Francisco
- San Jose
- Stockton

Colorado
- Denver
- Pueblo

Connecticut
- Bridgeport
- Hartford-New Britain
- New Haven
- Waterbury

District of Columbia
- Washington

Florida
- Jacksonville
- Miami
- Tampa

Georgia
- Atlanta
- Augusta
- Columbus
- Macon
- Savannah

Illinois
- Chicago
- Decatur
- Peoria
- Rockford
- Rock Island-Moline
- Springfield

Indiana
- Evansville
- Fort Wayne
- Gary
- Indianapolis
- South Bend
- Terre Haute

Iowa
- Cedar Rapids
- Davenport
- Des Moines
- Sioux City
- Waterloo

Kansas
- Kansas City

Kentucky
- Louisville
- Covington

Louisiana
- New Orleans
- Shreveport

Maine
- Portland

Maryland
- Baltimore

Massachusetts
- Boston
- Fall River-New Bedford
- Lowell-Lawrence-Haverhill
- Springfield-Holyoke
- Worcester

Michigan
- Detroit
- Flint
- Grand Rapids
- Kalamazoo
- Lansing
- Saginaw

Minnesota
- Duluth
- Minneapolis-St. Paul

Mississippi
- Jackson

Missouri
- Kansas City
- St. Louis

Nebraska
- Lincoln
- Omaha

New Hampshire
- Concord
- Manchester

New Jersey (northern section) North of and including Mercer and Monmouth Counties
- Trenton
- Newark
- Jersey City
- Paterson
- Camden
- Passaic
- New Brunswick
- Elizabeth

New York
- Albany-Schenectady-Troy
- Binghamton
- Buffalo
- New York City
- Rochester
- Syracuse
- Utica-Rome
- Westchester County

North Carolina
- Charlotte
- Durham
- Greensboro
- Winston-Salem-Asheville

Ohio
- Akron
- Canton
- Cincinnati
- Cleveland
- Columbus
- Dayton
- Racine

Hamilton-Middletown
- Springfield
- Toledo
- Youngstown

Oklahoma
- Oklahoma City
- Tulsa

Oregon
- Portland

Pennsylvania
- Allentown
- Altoona
- Erie
- Harrisburg
- Johnstown
- Lancaster
- Philadelphia
- Pittsburgh
- Reading
- Scranton-Wilkes-Barre
- York
- Bethlehem

Rhode Island
- Providence

South Carolina
- Charleston
- Columbia

Tennessee
- Chattanooga
- Knoxville
- Memphis
- Nashville

Texas
- Dallas
- Houston

Utah
- Salt Lake City

Virginia
- Norfolk
- Richmond
- Roanoke

Washington
- Seattle
- Spokane
- Tacoma

West Virginia
- Charleston
- Wheeling
- Huntington

Wisconsin
- Madison
- Milwaukee

The Cartoonists Have Fun with Rubber Salvage

"You'll have to come to it sooner or later, Melvin."

—Drawn for Division of Information, O. E. M.

"It saves gas, officer, and you have no idea how easy it is on the tires."

Drawn for Division of Information, O. E. M.

"I'm turning in this rubber stamp."

Drawn for Office of War Information.

The Tri-Cities Planning Project

A Cooperative Experiment among Small Municipalities

By PAUL OPPERMANN*
Federal Housing Administration

THE Tri-Cities Planning Project, an experimental pilot case in cooperative planning, was instituted by Earle S. Draper, Assistant Commissioner of Federal Housing Administration, in connection with research and analytical studies in urban areas for which he is responsible in the FHA organization. Mr. Draper stated as objectives, in setting up the project for a two-year period, the following:

Objective No. 1. To develop a workable and practical method of cooperative city planning, especially applicable in small cities, in which local, state, regional, and federal agencies would provide a pool of various types of cooperative effort to assist municipalities in their planning.

Objective No. 2. To select, test, and report on technical, procedural, and public relations methods appropriate in such cooperative community planning programs.

The Project office, because of the close relationship of the work to the program of FHA's Land Planning Division, was operated as a special unit of that Division. The director of the project, author of this article, was therefore administratively responsible to Seward A. Mott, Land Planning's Director.

Tennessee was selected because of the following favorable factors:

- Excellent planning statutes provided for up-to-date city planning programs and for cooperative planning of several governmental agencies
- An effective state planning commission offered strong support in conducting the experimental program
- TVA proffered assistance in supplying maps and research data

* Until recently, Project Director, Tri-Cities Planning Project; now associated with E. S. Draper, Assistant Commissioner, Federal Housing Administration, on urban redevelopment studies.

Bristol–Johnson City–Kingsport

The Tennessee cities—Bristol, Johnson City, and Kingsport—are about 25 miles apart on the points of an equilateral triangle. Bristol, Va., on the state line adjoining Bristol, Tenn., also has participated in the project from its inception. Including the population in the immediate environs, as well as that within the corporation boundaries, each local unit represents between 25,000 and 30,000 inhabitants.

General agreement was reached with the cities before proceeding with the program of cooperative planning proposed by FHA. An informal understanding was obtained regarding contributions and forms of assistance which the Tennessee State Planning Commission and TVA would supply. An inventory was made of maps, pertinent records, and researches which, when assembled and related to each other, provided a comprehensive factual picture of the cities and adjacent territory. More than a score of local, state, federal, and private agencies provided the facts which, presented on maps and in research, cover the main physical, social, and economic conditions of the "pilot case" cities.

Three of the four cities**—Kingsport,*** Johnson City, and Bristol, Va., are city manager cities. Full access to the municipal maps, files, and records, and unstinted cooperation of the three city managers and their operating departments, as well as the city commissioners and staff of Bristol, Tenn., were given to the project director and staff of the planning project office at all times.

** Bristol, Tenn., and Bristol, Va., are two separate jurisdictions but constitute one social and economic urban unit.

*** Home and headquarters of President Frank Cloud of the International City Managers' Association.

Federal Housing Administration, as chief sponsor, financed the nucleus of a technical staff, including salaries of the project director, an assistant, and a secretary. Office and drafting equipment and materials were supplied principally by FHA, but local sources supplied numerous special, short-term needs.

The important part played by the local planning commissions of the cooperating cities should be stressed. None of the four cities had previously appointed an official city planning agency, as authorized by Tennessee and Virginia enabling statutes. Ordinances were now enacted, however, establishing such agencies. The project staff at the organization meeting of each commission was appointed the joint technical staff and over-all coordinating unit.

During the first months, major emphasis was placed on preparing and interpreting the factual matter necessary as a basis for community planning and determining an appropriate organization form and procedure for the cooperative program. Certain practical applications of the planning process, involving utilization of the map and research materials, were instituted at an early stage, however. Selected examples of these are outlined briefly.

Front Street Improvement Project

The Planning Commission of Bristol, Va., requested a study be made by the project staff to effect an improvement in traffic conditions on a congested thoroughfare adjacent to the Norfolk and Western Railroad sta-

tion on one side and a principal hotel on the other. Drawings were prepared for an improved treatment of the area, including revamping of parking facilities, exists, and entrances to the station, and widening Front Street.

City officials, Planning Commission members, and the project staff as a group pooled ideas on the proposals, examining them on the ground with considerable attention to details and to finding the most economical solution.

The plans prepared for the City Planning Commission met with immediate approval of municipal officials and civic leaders and, when submitted to responsible officials of the railroad, their consent was obtained to financial and technical assistance in carrying out the project.

Meeting the War's Impact

Shortly after the events of December 7, the project director forwarded to the chairman of each local Planning Commission a memorandum which supplied a concise outline of ways in which the commissions, with assistance of their joint technical staff, could assist the local defense councils, and the communities generally, in meeting the war's impact. A check list of maps and community studies was prepared. The Johnson City Defense Council requested and obtained assistance. The land-use and population maps, street and traffic information were utilized in determining the city's defense districts and sub-districts and in locating defense control and service centers. A city-wide blackout traffic route was prepared, incorporating one-way streets and connecting the control center with outlying service centers. Aid was given on administrative planning and organizing for defense. The local Defense Coordinator and his aides are enthusiastic supporters of the technical assistance and information on community conditions available through the facilities of the planning office.

At present a joint committee of the Planning Commission and Chamber of Commerce of Johnson City is studying industries suitable to replace or complement local enterprises now declining or due to decline because of dislocation of markets.

Research for City Planning

A feature of the first stage of the project was a summer program for July and August, for which was brought together in Johnson City an auxiliary staff of planning and research assistants, supplemented by a group of high school and college NYA students. The services of three planning assistants were obtained through the good offices of the Town Planning and Housing Division of Columbia University. Two research assistants, graduates of Syracuse University's School of Public Administration, were employed and their services lent to the project by the Tennessee State Planning Commission. The cities contributed in cash, in addition to miscellaneous services, the sum of $1,000 to help defray staff expenses of the summer program.

Resulting from the summer's work, in addition to a series of maps of community conditions prepared for each city, are:

1. A survey of the economy of the Tri-Cities area;
2. A review and summary of the governments of each of the four cities; and
3. A survey of welfare and health services embracing local, state, and federal participation, contributions, and private services provided locally and from outside sources.

Community Conditions Maps

In the Tri-Cities Project overlay maps made on tracing paper (or tracing linen) have been used with excellent results. This type of map is quickly and inexpensively made and has the important advantage over other map techniques that information on separate maps drawn over a base map at the same scale may be used, one over the other, to show relationships of conditions.

The research studies of the urban and regional economic base are intended to point out the primary sources of local income and wealth; where these may be strengthened; in which directions opportunities may lie for improving the competitive position of the cities and the region as a whole. Measuring and gauging the sources, amounts, and trends in community development place a solid factual foundation under future plans.

The local government studies have provided working manuals for municipal officials and citizens, and the City Planning Commission members are helped to know the operations of the city government which it is their job to advise and assist in preparing community plans.

The study of welfare and health services shows clearly who does what and the cost of the large-scale job to be done in every city of caring for the sick, indigent, aged, and unemployed. The interdependence of federal, state, local government and private agencies is outlined convincingly.

Practical Aids to Municipal Government

The maps of land-use, population, vacant land awaiting use, and of the city-wide patterns of areas where utility services are supplied or will be needed in future are tools which the Tri-Cities are, increasingly, finding practical, economical aids to municipal government. Traffic plans, zoning plans, highway and railroad studies looking toward future relocations and extensions of routes to secure better circulation and reduce costly congestion were already under way, while the factual research studies and maps of community conditions were in preparation. The cooperative program in Tri-Cities is concerned with long-term planning needs of the communities. However, experience there is adding something also to the evidence that the Planning Commission and staff can pitch in and help the always short-handed and overburdened administrator.

Now transferred to joint Tennessee State Planning Commission and TVA sponsorship, the project is continuing to serve the local communities. As a laboratory to test city planning methods and procedures, and thus to assist our small cities in establishing sound guide plans for future development, the Tennessee experiment has something to offer, and the last word has not yet been heard from Tri-Cities.

"Bathing Attire Banned"

With the rather startling introductory statement that "The New York City Council has banned the wearing of bathing attire for all persons over 12 years of age, the *New York State Municipal News* calls attention to a new ordinance of the city of New York which provides that:

"It shall be unlawful for any person over the age of twelve to appear on any street in the city, unless such a street is within 200 feet of the boundary of a public park and public bathing beach and boardwalk under the jurisdiction of the Department of Parks, dressed in bathing or swimming attire or in a halter, shorts, sun suit, play suit, or attire of like nature, without wearing a wrap or covering which shall conceal that portion of the wearer's body extending from the shoulders to a point midway between the hips and knees."

Doing the Most with What We Have

WATER-WORKS men must revise their viewpoint on maintenance operations to help meet a situation on materials that is as pressing as it has been in the entire American history, according to L. R. Howson, President of the American Water Works Association at the New York meeting in Niagara Falls, held April 30 and May 1.

Much of the present equipment, stated Mr. Howson, can be kept in use by careful maintenance. Meters previously have been junked when the cost of maintaining them represented 50 per cent of the cost of a new meter. Now water-works superintendents must revise their viewpoint and keep meters in service as long as possible.

Lack of critical materials, he pointed out, must also force the operator to ingenious substitutes in order to increase the capacity of his plant and system Cleaning the mains, for example, will often add considerably to their capacity. As an emergency measure, a 12-inch main properly cleaned will carry the equivalent of a 16-inch main; an 8-inch will carry the equivalent of a 12-inch. This, he stated, involves no use of critical material. Strategic location of ground storage also may relieve pumping loads so that existing pumps will be adequate. To conserve critical material, these reservoirs may be constructed with sloping sides and wood tops.

Copper is out as a pipe material. Lead also is practically out. However, protected steel pipe properly dipped and wrapped with muslin is, in his opinion, an adequate substitute. Joint material is becoming difficult to obtain, and a suitable substitute represents a challenge to the ingenuity of operators.

It is no longer possible to obtain bronze impellers for centrifugal pumps. He pointed out that cast-iron impellers have been serving as suitable substitutes. Cavitation of impellers has been successfully repaired by carbon-arc welding.

Thus far, Mr. Howson stated, water-works operation has not been seriously disturbed. However he urged that the operators should be ready for any eventuality.

The greatest glory of a free-born people is to transmit that freedom to their children.

—William Harvard

The Municipal Bond Market

Listed below are recent sales of new issues of municipal bonds as reported in the July issue of *The Bond Buyer*. That weekly reports in its issue of July 18 the sale of $50,459,000 temporary loan notes of local housing authorities to various banks throughout the United States at interest rates ranging from 0.44 per cent to 0.93 per cent.

Amount	Borrower and Purpose	Rate (%)	Term (Years)	Basis (%)
$500,000	San Francisco, Calif., Fire Protection of 1942	0.5	1-33 Avg.	.48
153,335	Wichita, Kans., Paving and Sewer	1.16	5-5 Avg.	1.105
334,000	Detroit, Mich., Street Railway Revenue Notes	1.16	2.66 Avg.	1.1125
200,000	Lawrence, Mass., Municipal Relief	1.25	1-10 Ser.	1.21
100,000	Brockton, Mass., Surface Drainage and Sewer Loan	1.25	1-10 Ser.	1.22
175,000	Bridgeport, Conn., Sewage	1.24	7.85 Avg.	1.229
182,000	Albany Port Dist., N. Y., Refunding	1.4	4.85 Avg.	1.34
133,000	Stillwater, Minn., School	1.5	9.56 Avg.	1.352
2,976,000	Cuyahoga Co., Ohio, Refunding	1.5	3.75 Avg.	1.37
380,000	Fall River, Mass., Municipal Relief	1.5	1-10 Ser.	1.379
501,600	Clinton Co., N. Y., Funding	1.6	10.56 Avg.	1.559
329,000	Scranton, Pa., School Dist., Refunding	1.75	5.5 Avg.	1.645
1,279,500	Toledo, Ohio, Refunding	2	7.33 Avg.	1.84
2,800,000	Cleveland, Ohio, Refunding	2	9.85 Avg.	1.885
480,000	Akron, Ohio, Refunding	2.25	1-24 Ser.	2.13
387,000	Rusk Co., Texas, Road Refunding	3	3-5-5 O.-A.	3
238,000	Corson Co., S. D., Refunding	3.25	8.25-11 O.-A.	3.25

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Public Revenue Bonds As Legal Savings Bank Investments

TWO model statutes which might serve as guides to banking boards and lawmakers desiring to make public revenue bonds "legal investments" in their states were approved on June 12 by the Board of Governors of The Municipal Forum of New York.*

The special committee which prepared these guides expresses the opinion that "it is advisable at this time to restrict the bonds mentioned in these guides to waterworks, gas, and electric system revenue bonds. These constitute the greater part of the revenue bonds issued to date, this part amounting to as much as approximately $600,000,000."

The committee has defined revenue bonds so as to include not only bonds payable solely from revenues (which are the kind usually described as revenue bonds), but also bonds payable primarily from revenues and additionally secured by taxing power.

Essential tests for measuring the safety of revenue bonds as investments, in the opinion of the committee, are:

1. That the public body sponsoring the bonds is not in default and has not been in default for ten years.

2. That the utility shall have been in operation for a length of time sufficient to prove that its revenues are at a more or less constant level.

3. That the revenues of the utility are adequate to provide for its proper operation and maintenance, for the payment of the revenue bonds, and the maintenance of an adequate reserve therefor.

4. That the utility is sound from an engineering standpoint.

5. That the proceedings for the issuance of the revenue bonds have been legally taken, and that proper remedies exist to enforce the collection of the service charges and for the protection of the bondholders in the event of default.

Corollary to these essentials are covenants to maintain and operate the utility, to fix rates adequate to provide operation, maintenance, and debt service charges, and to pledge sufficient revenues to pay the bonds.

Definitive provisions on all of these points are set forth in the full texts of the proposed guides. The guides and a covering letter from the special committee which drafted them was published in *The Daily Bond Buyer* of June 20, 1942. Reprints are obtainable from the acting chairman of the committee—Cushman McGee of the investment bond house of R. W. Pressprich & Co., 68 William Street, New York.

* The Municipal Forum of New York is an organization formed four years ago as a medium for discussion of municipal finance on the part of men in financial institutions in New York and the nearby cities. The membership consists of buyers and analysts of state and municipal securities who are engaged with banks, insurance companies, trust companies, and investment dealers, as well as municipal bond attorneys. Several municipal officers of suburban communities engaged in business in this area are also members of the organization. Charles E. Aufderhar, Jr., of the Savings Banks Trust Company, 14 Wall Street, New York, is president.

PLACE IN YOUR TELEPHONE DIRECTORY WITH SCOTCH TAPE

WAR DIRECTORY

of SOUTH BEND, INDIANA • JUNE, 1942

Published by the

ASSOCIATION of COMMERCE

A directory of agencies and offices operating in South Bend dealing primarily with the War Program.

TELEPHONE 3-5121

Many other agencies in South Bend (not listed) are also taking an integral part in the war effort.

AMERICAN RED CROSS
Volunteer Service
First Aid Headquarters

ARMORY, THE

ARMY AIR FORCE
South Bend Area
Studebaker Aviation

ASSOCIATION OF COMMERCE

CITY OF SOUTH BEND

CIVIL AERONAUTICS ADMINISTRATION

CIVIL AIR PATROL
Squadron No. 1
Squadron No. 2

CIVILIAN DEFENSE
City of South Bend
Mishawaka

(Over)

DEFENSE HOUSING:
Walnut Grove Center Plan

F.B.I.—(Also Army and Navy Intelligence):

INDIANA STATE GUARD:

NATIONAL DEFENSE TRAINING PROGRAM
E.S.M.D.T.:
Vocational Education Dept., Public School
M.Y.A. Project

NAVAL MATERIALS INSPECTOR:

NAVY V-7 PROGRAM:

OFFICE OF PRICE ADMINISTRATION—(OPA):
War Price and Rationing Boards
Rent Administrator

SELECTIVE SERVICE BOARDS—(Local):

TRAINING WITHIN INDUSTRY—(T.W.I.):

U. S. ARMY RECRUITING OFFICE:

U. S. EMPLOYMENT SERVICE:

U. S. GOVERNMENT:

U. S. MARINE RECRUITING OFFICE:

U. S. NAVY RECRUITING OFFICE:

VIGILANCE COMMITTEE FOR RAILROAD CAR EFFICIENCY—Association of American Railroads:

WAR DRIVES BOARD:

WAR PRODUCTION BOARD—(WPB):

WAR SAVINGS STAFF—(War Bonds and Stamps):

The Association of Commerce has two primary objectives:

1. Help win the war.
2. Promote and protect the industrial, commercial, and civic aspects of South Bend.

PLACE IN YOUR TELEPHONE DIRECTORY WITH SCOTCH TAPE

(Over)

This War Directory, issued to its members by the Association of Commerce of South Bend, Ind., is printed on the two sides of a sheet of heavy colored paper, of proper size for pasting in a telephone directory

Wartime Civic Directories

TO the Editor of THE AMERICAN CITY:

I have been very much interested in reading reports concerning activities of various Chambers of Commerce in wartime, published in THE AMERICAN CITY.

While Minneapolis does not have a "Chamber of Commerce" (the grain exchange having borrowed that name some years ago), we do have seven major civic organizations whose activities take in the Chamber of Commerce field—coordinated and financed by the Minneapolis Civic Council.

Not long ago we made an inventory of the wartime services of these organizations and published a partial list as a supplement to our Civic Directory. I enclose a copy of this since it shows how Minneapolis civic organizations have "converted" their facilities into a "win-the-war" drive.

ALLEN H. SEED, JR.,
Executive Vice-President, Minneapolis Civic Council.

(The above mentioned directory, reproduced in the adjoining column, is in card form, measuring 4 by 9 inches.)

☆ **WAR SERVICE SUPPLEMENT** ☆
TO
CIVIC DIRECTORY

☆ ASSOCIATED INDUSTRIES
Expedites negotiation of collective bargaining contracts in advance of their expiration as a means of stabilizing employment, so that all energies can be devoted to defense production.
Has enlarged job-placement clearing house to assist employers and employees affected by priorities, selective service, etc.
Active in the prompt settlement of labor disputes and promotes to avert misunderstandings that lead to work-stoppage.

☆ BETTER BUSINESS BUREAU
Exposes rackets disguised in patriotic appeals.
Gathers factual information for War Chest appraisal of patriotic fund raising.
Supplies reliable information on trade and vocational schools training personnel for war industries.
Acting OPA discourage advertising designed to scare buyers into panic purchasing.

☆ HENNEPIN COUNTY GOOD ROADS ASS'N
Assists public agencies plan and locate access roads to war industries, military highways.
Planning combined road construction to improve trade artery access and provide work reserves when conditions require.

☆ HENNEPIN COUNTY SAFETY COUNCIL
Organizing full effort to conserve manpower, materials, through reduction of accidents on highways, industrial plants, homes.
Conducts "Occupational Safety Conferences" for foremen and supervisors in defense plants and other industrial organizations.

☆ MINNEAPOLIS CIVIC & COMMERCE ASS'N
Provides consultation and service for firms seeking defense orders, making plant conversions.
Has executive direction City air raid protection program.
Provides office equipment service, Civilian Defense Council.
Headquarters for Federal salvage of manufacturing equipment.
Conducts clinics on inspection of metals for defense industries.
Maintains up-to-date files on Federal purchasing agencies.
Aids skill-training program for defense job workmen.
Gateway Bureau furnishes panel information to supplement defense workers, etc.

☆ MINNEAPOLIS RESEARCH BUREAU
Collects, disseminates factual data on new and old civic problems affected by war impact.
Gathers facts, makes long-range studies to aid Minneapolis solve post-war problems.

☆ MINNEAPOLIS TAXPAYERS ASSOCIATION
Closely scrutinizes city, county, state spending to eliminate non-essentials, provide funds for maximum war effort with least burden to taxpayers.
Answers questions, furnishes data, keeps up-to-date records on all tax laws.

(over)

☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆

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Justice William O. Douglas, of the U. S. Supreme Court:

"Hitler never had any doubt that we would arm and that we would fight. But, with his cynical contempt for the intelligence of the common man and the integrity of democracy, he has been gambling against the ability of our millions of average families to understand our emergency, to respond to it with a singleness of purpose, and to cope with it realistically. When we have fought our way to victory, the Nazis will finally understand that the decisive secret weapon in our arsenal is the mind and the spirit of the average American, who wants the truth and who always wants to know how he can do his job better. This is the reason why the average American is counting on the ability of the press to keep him on the right course during these dark days."

As quoted in
TIME for June 29, 1942.

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Municipal Priorities

(*Continued from page 5*)

Access roads and bridges will be provided only on certification of need from the Army, Navy, or War Production Board. Other restrictions on road construction apply primarily to rural rather than urban areas and need not be discussed here.

Hospitals, Health Centers, and School Houses

Regarding hospitals, detention centers, and health centers, the agreement specifically states:

No such project may be authorized to begin construction or to be recommended for priority assistance unless,

1. There are no existing buildings adaptable for hospital health use.
2. The existing hospital facilities serving the community and the surrounding area have become so overcrowded that (a) the rate of occupancy of existing general service beds during the last six months has averaged about 90 per cent, and (b) it is certain that requirements for additional facilities within the next year will greatly expand because of the influx of population.
3. New construction shall result in not more than four beds per thousand persons present or anticipated within the year.

The conditions governing approval of schoolhouse construction are, in the language of the agreement:

1. The construction project is located in a critical defense area;

2. Existing school facilities are being utilized to full capacity;

3. All other suitable space which could be used for school purposes has been exhausted;

4. There are no available school facilities within reasonable travel distance of the localities. (It is recommended that county or state regulations preventing inter-community use of facilities be modified to permit the fullest utilization of such facilities.)

In the case of requests for new construction of hospitals, made necessary by enemy action, applications for priority assistance will be acted upon immediately. A new building may be erected to replace a schoolhouse, wherever located, that has been destroyed by fire, flood, tornado, earthquake, or enemy action, if other facilities are not available. The same is true if an existing school building has been condemned by competent authorities.

"The Realities of War"

In general, municipal authorities who are preparing to apply for war public works projects should remember that only the simplest possible construction accords with the realities of war. Monumental structures are definitely out. So, for new construction, are buildings more than two stories high. In cases where a multi-story addition to an existing building will require less critical material than a new one- or two-story building, the addition will be approved. In at least one instance, the method of increasing hospital facilities that was found most economical of critical materials was adding a fourth story to a three-story building. But in general the rule is that only one-story frame and one- or two-story masonry structures will be approved, and that such structures must have stairs or ramps instead of elevators. Only where a temporary building will not meet the immediate wartime need will a permanent building be approved. In this connection, the agreement reads as follows:

"Applications for the construction of schools, public buildings, hospitals, clinics, dispensaries, etc., may be approved only if the proposed building is designed so as to eliminate the use of structural steel, reinforcing steel, steel lockers, steel lintels, metal lath, ornamental metal work, steel partitions, steel stairs, metal window frames, bronze doors, bronze hardware, bronze lighting fixtures, decorated plaques, copper flashing, copper drain pipes, copper screens, and other metal items for which non-critical material can be substituted."

To Speed Construction

Now that we are in accord as to what shall be built, we are prepared to speed the construction of those projects which are indispensable to the war effort. We have given assurance to the War Production Board that we will not submit any request for a priority or for an allocation of materials unless we are convinced that the project is necessary to the winning of the war.

If municipal authorities preparing to submit projects to us will familiarize themselves with the rules and prepare their designs accordingly, they will help themselves as well as FWA by cutting down the time lag between proposal of an indispensable project and its completion.

City Manager Appointments

FRANCIS R. ATKINSON, an engineer in the state public works department and former assistant manager of Stoughton, Mass., was appointed manager of that town on July 1.

JEAN ASSELIN, manager of La Tuque, Quebec, since 1934, was appointed first city manager of Trois-Rivieres, Quebec, on June 9.

ROBERT E. BAUMBERGER, city manager of Ludlow, Vt., since December, 1940, and former manager of Castleton, Vt., 1939-40, was appointed first city manager of Mill Valley, Calif.

OWEN BELL, former chief clerk and accountant, has been appointed town manager of Killingly, Conn., to succeed LAWRENCE F. MCCLUSKY, who is entering private business.

J. C. DOROUGH, city clerk and treasurer of Cordele, Ga., for the past ten years became city manager of that city on April 7. He replaces G. W. WILKES.

ARMAND GAGNON was appointed town manager of La Tuque, Quebec, succeeding JEAN ASSELIN who became first manager of Trois-Rivieres.

J. S. HARRISON is now city manager of Panhandle, Texas.

FRED H. HOWARD, public relations director of Tarpon Springs, Fla., was appointed city manager of that city to succeed J. F. PARKINSON, now serving as manager of Portsmouth, Ohio.

CHARLES C. MCCALL, former engineer of Waynesburg and Green County, Pa., was appointed first borough manager of West View, Pa., effective July 1.

A. C. NICHOLS, city manager of Greenwood, S. Car., since June, 1939, and former manager of Clearwater, Fla., has been appointed city manager of Wilmington, N. Car. He succeeds JAMES G. WALLACE who is now at Kenosha, Wisc.

R. W. RINK, former assistant in the engineering department, has been appointed acting city manager of Coronado, Calif. CAPTAIN MARVIN W. REED, the city manager, and FRED KOERNER, former acting manager, are now in the United States Army.

RICHARD H. SMITH has replaced DON C. SCOTT as city manager of Phoenix, Ariz. Mr. Smith was former secretary of the Civil Service Commission.

JAMES G. WALLACE, city manager of Wilmington, N. Car., and previously manager of Bangor, Maine, has become city manager of Kenosha, Wisc. He succeeds LEROY WOLFF.

GUY L. GEARHART has succeeded H. W. COLEMAN as city manager of Vinton, Va.

J. H. LAKE was appointed city manager of Rapid City, S. Dak., on July 20, to succeed A. S. HOLM.

CLARENCE E. RIDLEY,
Executive Director, International City Managers' Association.

Insurance against Attack Damage

JULY 1 was the effective date of the government plan of war-damage insurance which Secretary of Commerce Jesse Jones worked out with the fire insurance industry. Everyone desiring protection against enemy attacks must make application, because blanket protection expired by law June 30. Anyone wanting the protection should see his local fire insurance agent or broker.

Policies will be issued for a 12-month period to cover physical loss of real and personal property which may result from enemy attack or action of our own forces in resisting enemy attack. Blackout, sabotage, capture, seizure, pillage, looting, use and occupancy, rent, rental value, or other indirect loss or consequential damage will not be covered.

Recognizing that losses occasioned by war are a national problem, Congress specified that rates should be geographically uniform as follows:

Growing crops	5c on $100
Farm buildings, dwellings, rural and urban, including contents	10c on $100

No coinsurance will be required on farm buildings and dwellings, but on all other property a 50% coinsurance clause will be required, with fixed credits from the established rates for coinsurance above 50%.

	On Fire Resistive Construction	On Ordinary Construction
	(Cents per $100 value)	
Churches, hospitals, public buildings	10	15
Apartments, office buildings, warehouses	15	20
Manufacturing plants, wharves, bridges	20	30
Vessels under construction	25	37½
Vessels devoted to storage or industrial use	50	75
Ferries, commercial hulls, storage cargo, pleasure craft	50	75

No protection will be given for accounts, bills, currency, deeds, evidences of debt, securities, money and bullion. Coverage is being sold by the agents and brokers of insurance companies, but the contracts will be with the War Damage Corporation. Existing forms of insurance by private companies generally do not contain any provision for coverage against the particular hazards of war for which this governmental body was created.

The insurance companies cooperating in the program will assume 10 per cent of all losses in excess of net premiums collected after expense. The fiduciary agents will be paid 3½ per cent of premiums collected to cover their costs and overhead, with a minimum of 50 cents per policy, and a maximum of $700. The producers—insurance agents and brokers—will be paid a commission of 5 per cent of premiums collected with a minimum of $1 and maximum of $1,000 per policy.

Inquiries should be addressed to War Damage Corp'n., Washington, D. C.

Local Government Is News

(Continued from page 65)

blocs can often frustrate good management and build barriers to effective overall control. Neutrality is indispensable if internal reporting is to serve a useful purpose. On the other hand, the reporting officer must not become a "stooge" for his superior or for his own department. Especially with respect to budgetary and other fiscal reports within finance departments, the internal report is a means of checking on the requests of other departments. If the reporting officer adopts the attitude that all such requests are prima facie ultra vires, even if his department's overall policy may seem to justify it, his usefulness will be diminished. "General propositions never decide concrete cases" is a good rule to follow—although at times it runs counter to official attitudes above.

The Practice of Internal Reporting

Many other questions naturally arise in developing a regular system of internal reporting. How frequently should routine reports be called for? What standard forms can be developed? How far can the data of departmental operations be reduced to statistical summaries? How install and supervise a reporting system? The answers to these questions will vary with the functions and size of individual departments. No uniform pattern can be prescribed. Some suggestions will be noted in a future article. That the questions are pertinent is indicated by the growing attention being given to internal reporting by City Halls all over the country.

[The text of the poem by Strickland Gillilan referred to on page 65 follows:]

Finnigin to Flannigan

By Strickland Gillilan (1869–)

Superintendent was Flannigan;
Boss of the section was Finnigin,
Whiniver the kyars got offen the thrack
An' muddled up things to the divil an' back,
Finnigin writ to Flannigan,
After the wreck wuz all on agin;
That is, this Finnigin
Repoorted to Flannigan.

When Finnigin furst writ to Flannigan
He writed tin pages—did Finnigin
An' he tould jist how the smash occurred;
Full many a tajus, blundering word
Did Finnigin write to Flannigan
After the kyars had gone on agin;
That was how Finnigin repoorted to Flannigan.

Now Flannigan knowed more than Finnigin
He'd more education—had Flannigan
An' it wore him clane and complete out
To tell what Finnigin writ about
In his writin' to Musther Flannigan
So he writed back to Finnigin:
"Don't do sich a sin agin.
Make 'em brief.—Flannigan."

When Finnigin got this from Flannigan,
He blushed rosy rid—did Finnigin
An' he said: "I'll gamble a whole month's pa-ay
That 'twill be minny an' minny a day
Before Sup'rintindint,—that's Flannigan,
Gits a whack at this very same sin agin;
Repoorts won't be long agin."

. . . . . .

Wan day on the siction of Finnigan
On the road sup'rintinded by Flannigan
A nail gave way on a bit of a curve
An' some kyars wint off as they made the swherve.
"There's nobody hurted," ses Finnigin
"But reports must be made to Flannigan."
An' he winked at McGorrigan
As married a Finnigin.

He was shantying thin was Finnigin
As many a railroader's been agin
An' the smoky o'l lamp was burnin' bright
In Finnigin's shanty all that night;
Bilin' down his report was Finnigin,
An' he writed this here: "Musther Flannigan:
Off agin, on agin,
Gone agin—Finnigin."

Traffic Control and Facilitation

Conducted by Traffic Control & Facilitation Committee, Institute of Traffic Engineers, 60 John St., New York

Merwyn A. Kraft, Chairman; Virden A. Rittgers, Vice-Chairman; David M. Baldwin, Martin E. Bruening, Stephen Butterfield, Edgar F. Copell, John E. Ecker, Fred W. Fisch, Emmett E. Kirwan, Foster M. Kunz, Alger F. Malo, Walter W. Matthews, John R. Mortarty, Henry W. Osborne, I. S. Shattuck, Matthew C. Sielski, Richard Siver, John L. Towers

Staggered Hours—a Review of Progress in a New Art

By J. Trueman Thompson
Director, Highway Traffic Advisory Committee to The War Department

In February, Joseph B. Eastman, Director, Office of Defense Transportation, stated that where necessary working and school hours must be staggered in order to utilize more effectively the available local transportation facilities of the country. In the past these facilities have been used with the prodigal extravagance typical of the whole American way of living in normal times. Conservatively expressed, approximately 50 per cent of all local transit vehicles are normally idle during daylight hours, except for the relatively short morning and afternoon rush periods. Not only is such a condition wasteful of valuable equipment but it is also uneconomic in its utilization of manpower. Many bus drivers and street-car motormen work but a few hours a day—a productive level that cannot be condoned during wartime.

Both the equipment and manpower phases of local transportation are daily becoming more critical. For the duration there is every present indication that practically no new buses, streetcars, or trolley coaches will be built. Furthermore, there is a continuing drain on personnel being made by our military and naval forces which is cutting transit personnel to a dangerously low level. Thus there is increasingly apparent an urgent necessity to take immediate action to get the most out of our present transportation systems within the limits of the available equipment and personnel.

Recognizing the need to focus national attention on local transport conservation, to which staggered hours can make a major contribution, Mr. Eastman, in March, requested the Highway Traffic Advisory Committee of the War Department to undertake the administration of a plan designed to promote both staggered hours and group riding programs. This assignment was accepted and there is now a national staff comprising both paid and voluntary workers actively in the field.

Already much has been accomplished as a result of the work of this group and the related activities of others who anticipated the situation and began independent planning of a solution. In many places the main progress to date has been in the collection and analysis of data and in securing cooperation of affected groups so that when the plan is fully formulated it can be made effective with little loss of time. The importance of this phase of the work cannot be minimized. Much harm can come from unwise programs of staggered hours based on inadequate information and analysis. It is not enough just to stagger hours; the plan of staggering must be carefully considered from the standpoint of its ultimate effect on the transportation loads. Staggering of hours is not the ultimate objective, but rather it is a mechanism by which the objective of transportation relief can be obtained with minimum inconvenience and cost.

Where staggered hours plans are now in effect, such excellent results have been achieved that it can no longer be said that staggered hours are merely an idealist's dream of transportation perfection. The case for staggered hours has been proved by the substantial benefits experienced in many places, often well in excess of anticipation. Transportation equipment and manpower are already being used at a greatly increased efficiency, providing a better standard of transportation even in the face of lessened use of private automobiles due to gas and tire rationing which has transferred a heavy load from private to public transportation facilities.

Perhaps the most significant thing about the work that has been done to date in staggering hours is that there is no straight and narrow road that leads directly to the answer. The transportation load factor has been bettered by many different types of changes in hours, sometimes applied to a specific part of the working or school population, with others applied to practically all workers. In some instances the changes have been made on a sectionalized basis, in others they have applied to the city as a whole. In some cities all office workers in an area start and stop at specified uniform times while those in adjoining zones are on a different schedule. In other places the starting and stopping hours are fixed by such a simple common denominator as the street address.

The following review of what is being done throughout the country does not purport to be a complete analysis of all activities, but rather portrays the general trend. For a more complete statement of the status of staggered hours, the reader is referred to a release of the Chamber of Commerce of the United States entitled "Local Passenger Transport Conservation Program," dated June 19, 1942.

School Hours

High schools, in many places, contribute a substantial transit load during the morning rush hour but add little in the afternoon inasmuch as schools usually adjourn in time for the children to reach their homes before the customary evening peak occurs. Conventional school opening hours are usually between 8 A.M. and 9 A.M. It is possible, therefore, by setting later school opening hours to take this school traffic out of the morning peak without putting the closing hours so late as to impinge on the afternoon peak. Two examples indicate what may be accomplished in this way. In Boston, a change in the opening hours of five centrally located high schools from 9 A.M. to 10 A.M. released 5,000 seats for adults in the morning rush hour and thus appreciably increased the capacity of the Boston Elevated Railway System. [illegible]s Angeles a change from a 9 A.M. opening to a 9:30 A.M. opening of all city high schools released 175 buses for worker transportation in the morning rush hour.

The tabulation at the top of page 76 shows the pre-war opening hours of high schools and the hours at which these same schools will open in the fall —a representative cross section of

TYPICAL NEW SCHOOL HOURS IN A NUMBER OF CITIES

City	Pre-War Opening Hours	1942 Fall Opening Hours
Waterbury, Conn.	8:00 A.M.	8:30 A.M.
Dallas, Texas	8:30 A.M.	9:00 A.M.
Jacksonville, Fla.	8:30 A.M.	9:00 A.M.
Toledo, Ohio	8:30 A.M.	9:00 A.M.
Pontiac, Mich.	8:30 A.M. & 8:40 A.M.	9:00 A.M. & 9:15 A.M.
Los Angeles, Calif.	9:00 A.M.	9:30 A.M.
Washington, D. C.	9:00 A.M.	9:30 A.M.
Boston, Mass.	9:00 A.M.	10:00 A.M.

those cities that have adopted changed school hour schedules.

Store Hours

Just as in the case of school hours, store hours are generally being set later. In most cities stores have been or are opening after the morning traffic has reached its maximum and closing directly in the evening peak, throwing a very heavy load of home-bound shoppers on to the streets at the very worst hour. Later opening and closing store hours have the dual advantage of helping to reduce the evening peak and, at the same time, improving shopping conditions by making it possible for downtown office workers and employees of war production plants to shop in the late afternoon after the close of work.

With the adoption of staggered-hours plans stores have instituted noon openings and late evening closings on one day of the week in several places. This has the desirable effect of relieving afternoon peaks by making it possible for a certain percentage of the shoppers, who might otherwise find it most convenient to shop in the late afternoon, to change to an evening shopping time when there is a large surplus of transit equipment available. In Washington, for example, major department stores are open one evening a week; in Cleveland on Monday, department stores open at 12:30 P.M. and close at 9:00 P.M.; in South Bend, Ind., stores are open until 8:30 P.M. on Monday.

Another interesting development which has had a pronounced effect in reducing shopping peaks is that of staggering pay days. In many medium-sized cities a large percentage of the population is employed in one or two large industrial plants, generally all paid on the same day. The heaviest traffic day is that immediately following pay day. By staggering pay days so that approximately 20 per cent of the payroll is met on each day from Monday to Friday, these heavy peaks automatically disappear.

Among the most interesting staggered-hours plans are those of Washington, Los Angeles, Providence, and Detroit, now in effect, and the plan proposed in a recent report by the Atlanta Chamber of Commerce.

Washington, D. C.

Working hours in Washington were first staggered by order of President Roosevelt on March 31, 1941, affecting approximately one-half of the 160,000 employees in the executive branch of the government. On a typical heavy bus line, as an example, the morning peak was reduced by 25 per cent, notwithstanding a 6.9 per cent increase in the total passengers carried during the morning rush as a whole, while in the afternoon the same line showed a 30 per cent reduction in the peak, with 11.3 per cent greater rush-hour traffic.

These benefits were, however, largely wiped out by the great increase in the number of employees working in downtown Washington, so that it was necessary on January 26, 1942, to adopt a new plan which involved a reshuffling of the hours of work of government employees and the changing of hours of work in many downtown offices and stores. Starting hours now range from 7:30 A.M. to 9:30 A.M., and quitting times from 3:30 P.M. to 6:00 P.M.

Los Angeles, Calif.

On April 20, 1942, the hours of work of about 157,000 people in the downtown district were changed. Previously about 50,000 of these workers left the downtown district at about 5:15 P.M. Under the new schedule this is reduced to 20,000.

Government employees' hours are 7:30 A.M.-4:00 P.M. and 7:45 A.M.-4:15 P.M. Civil court hours have been advanced one hour to 9:00 A.M.-3:30 P.M. Office and loft employees' hours depend upon their location in the district. No special starting hours are set, but quitting times are fixed at 4:30 P.M., 4:45 P.M., and 5:00 P.M. Three zones have been established, and all employees in the first zone quit work at 4:30 P.M.; in the second and third zones stopping times are 15 and 30 minutes later, respectively. It is estimated that this plan will enable the transit companies to carry four times as much traffic as in 1941.

Providence, R. I.

For the present, the staggered-hour plan applies only to shops employing less than 100 persons, offices with less than 50 employees, and offices of retail stores. Factories with even street numbers now close at 4:00 P.M.; with odd street numbers at 4:15 P.M. Offices whose main office number is even, close at 4:30 P.M. while odd-numbered offices close at 4:45 P.M. Offices of retail stores release one-half of their office employees at 4:30 P.M. and the other half at 4:45 P.M.

Detroit, Mich.

Detroit is attacking its problem mainly from the industrial standpoint, having divided the city into regions and applying staggered hours region by region. The first change was made on June 1 in the southwest district affecting 11 factories employing 30,000 war workers. Of these, approximately 50 per cent went to work at the same time. Under the new plan no more than 15 per cent start simultaneously. On July 1, the next change took place affecting an additional 275,000 workers which, with those already on changed hours, comprise approximately 70 per cent of the industrial workers in the Detroit area.

Atlanta, Ga.

The Atlanta plan proposes a change in working hours affecting about 18 per cent of Atlanta's 140,000 workers. These changes will range from 15 to 60 minutes with the majority being 30 minutes or less, and are to be made in four successive steps, designed to increase rush-hour capacity by 20 per cent.

The first step proposes to set school and store hours 30 minutes later. Schools would open at 9:45 A.M. instead of 9:15 A.M. Store hours which are now 9:00 A.M.-5:30 P.M. will be changed to 10:00 A.M.-6:00 P.M.

The next step affects public utilities, insurance offices, and federal employees. Public utilities now opening at 8:30 A.M. would open at 8:00 A.M. and those opening at 9:00 A.M. would open at 9:15 A.M. Insurance offices now opening at 8:30 A.M. and 9:00

CHANGED STORE HOURS IN TYPICAL CITIES

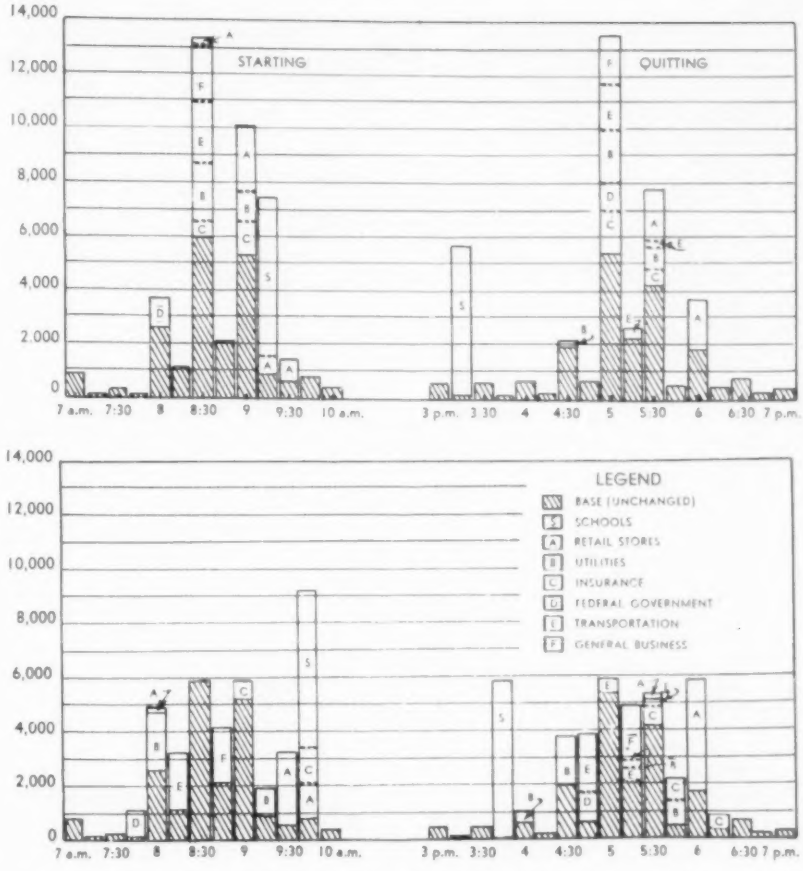
City	Pre-War Hours		Present Hours	
	Opening	Closing	Opening	Closing
Nashville, Tenn.	9:00 A.M.	5:30 P.M.	9:30 A.M.	6:00 P.M.
Cleveland, Ohio			9:30 A.M.	5:30 P.M.
Pontiac, Mich.	9:00 A.M.	5:30 P.M.	10:00 A.M.	5:30 P.M.
Los Angeles, Calif.			10:00 A.M.	6:00 P.M.
Washington, D. C.	9:30 A.M.	5:45 P.M.	10:00 A.M.	6:00 P.M.
Indianapolis, Ind.	9:30 A.M.	5:00 P.M.	10:00 A.M.	6:00 P.M.
			10:00 A.M.	5:30 P.M.

A.M. would open at 9:00 A.M. and 9:15 A.M. respectively. A small group of federal employees would report at 7:45 A.M. instead of 8:00 A.M.

The next step is a change in the working hours for groups of establishments outside the downtown area, including laundries, wholesale stores, food packers, industrial practices, general offices, and printers. In most instances earlier opening and closing hours are provided.

The final step affects railroad offices and general business offices. Railroad offices would open at 8:15 A.M. instead of 8:30 A.M., and general business offices at 8:45 A.M. instead of 8:30 A.M.

The several methods of adjusting office and factory hours which are being used emphasize fully the necessity for careful local consideration of the problem before embarking on any definite plan. Transit company officials should be contacted at once where the problem of congestion appears on mass-transportation systems in order to secure a knowledge of their operating problems, available equipment, and like factors. Contemplated plans should be discussed with police and business management in order that their problems may be considered. Out of such conference and study should come a definite determination on the part of those elements in the working population which will by a change in hours most largely improve the transit load factor. Adjusting these, and these only, will generally produce the required lessening of peak volume intensity with accompanying spreading of the peak to enable now idle or partly idle equipment to be usefully employed.



The top chart gives the pre-war Atlanta, Ga., opening and closing work hours for the vocations named in the lower chart which gives the present opening and closing work hours in Atlanta. *(See also Houston chart, page 38)*

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Trolley Operation Improved 20 Per Cent

A SERIOUS transportation bottleneck developed at one of our country's largest naval operating bases due to personnel many times the peacetime total, and an ever-growing shortage of private vehicles, says Harold Hammond, National Conservation Bureau, New York. During the peak load periods, when 100 minutes were required to make a round trip, only 4 of the 41 trolleys were able to make two trips. Trolleys were packed to overflowing and waits of an hour were not uncommon.

The trolley route is 15 miles long. Before remedial measures were put into effect, there were 108 marked trolley stops. Studies showed that although no trolleys were required to stop at all the 108 points, many were making from 50 to 60 stops *each way*, frequently no more than a few hundred feet apart. The principal cause of delay resulted from an excessive number of marked trolley stops.

A further cause of delay was chargeable to two adjacent signalized intersections. The peak traffic flow at each of these intersections amounted to 1,000 vehicles per hour. The signals were not timed in accordance with the current traffic flow pattern and resulted in traffic tie-ups several blocks in length. Delay was further increased by parking too close to the corner at one of these signalized intersections.

In accordance with practices advocated by the ODT, the number of loading zones was reduced from 108 to 35. New stops are plainly marked and are observed 24 hours of the day.

The signal cycle length at the two critical intersections was reduced from 60 seconds to 40 seconds, signal phases were adjusted to conform to the current traffic pattern, and the signals were synchronized with a 12-second offset to permit progressive movement of trolleys and several bus lines.

Parking was pulled back three stalls at the most choked intersection to provide two-lane approaches.

Here are the results:

Trolley trip time reduced from 100 to 80 minutes.

The number of trolleys making more than one trip during a peak period has been increased by 8, thus enabling some 700 more passengers to be carried during each peak period.

Trolley and vehicle tie-ups at the two treated intersections have been eliminated.

Prepared by
FRANK B. WILLIAMS
Author of "The Law of City Planning and Zoning"

Zoning and Planning Notes

With the cooperation of
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Author of "Zoning" and of "The Master Plan"

Zoning Ordinance—Farming—Horticulture

CALIFORNIA.—*Hagenburger* v. *City of Los Angeles*, District Court of Appeal, April 7, 1942, reported 124 P. (2d) 345.

The plaintiff Hagenburger is the owner of a piece of land situated in a residential district. This land he is using entirely for the purpose of seeding, planting and raising plants. Sales are not ordinarily made on the land, and the plants are not there displayed for sale. The business is chiefly wholesale, and is confined to the trade in cactus, succulents and novelty plants. A principal office is maintained at another place some distance from this land.

The zoning ordinance allows "farming" in residential districts, and the plaintiff claims that the business conducted on this land is not farming. This claim the Court overrules, holding that farming includes gardening and horticulture; and therefore the ordinance does not preclude the plaintiff from continuing the business as he is conducting it on the land in question.

Zoning Ordinance—Manufacturing Use Prohibited Within a Given Distance of Another Use

ILLINOIS.—*City of Chicago* v. *Reuter Bros., Iron Works*, Appellate Court, April 20, 1942, reported, 41 N. E. (2d) 213.

The ordinance in question creates what is called a "M 2" use manufacturing district, and provides that no such use shall be established nearer to a residence district than 200 feet, nor nearer to a commercial district than 125 feet. This use is defined as including the handling of materials which customarily emit noises affecting the comfort or welfare of occupants of residence districts located within 400 feet of the premises occupied by the "M 2" use. This use is also defined as including "metal fabricating processes and the assembling of materials where snap riveting is done, and where processes creating noises permitted * * * for the manufacturing of such products as * * * structural and reinforcing steel for buildings, bridges, ships and other structures * * *."

The defendant company was charged with violating this ordinance. The defendant argues that as he was engaged only in assembling he was not manufacturing and cannot be held. But manufacturing may include a number of successive processes which may be required to make the finished product. The defendant is therefore guilty of manufacturing contrary to the ordinance.

Zoning Ordinance—Front of House

NEW JERSEY.—*McGhee* v. *Mayor and Council of Borough of Tenafly*, Supreme Court, reported 22 Atl. (2d) 573.

The lot in question is a corner lot. In such cases the owner may select the rear lot line. But this does not give him the right to say his house faces differently from the way it does face. The entrance of the house in question faces Westervelt Avenue. To the rear is the kitchen and dining room. Usual house construction requires a front entrance. It is not customary to bring guests in by the kitchen.

Therefore the rear line of the lot is on Knickerbocker Road, and the house is constructed in violation of the ordinance in that it is too close to the rear lot line. The ordinance must be construed in the light of the ordinary meaning accorded to words.

Zoning Board of Appeals

NEW YORK.—*Matter of Miller*, Supreme Court, reported New York Law Journal, June 9, 1942, page 2452.

In dismissing the appeal from the decision of the Board of Standards and Appeals, the court says:

"In so far as the appeal is on the ground that a portion of the property is in a residential district and therefore not subject to the provisions of Section 7(f) of the [New York City] Zoning Resolution, the contention is not sustained because this court could modify the board's resolution so that the permit would extend only to the portion of the property lying within the business district; but inasmuch as the residence district area consists of about 9.7 square feet out of a total of 6,853 square feet and the plans submitted to the board do not call for the creation of a nonconforming use in the residence area, the matter is not of sufficient importance to justify the modification. . . ."

Delay in Issuing Permit Pending Amendment of Ordinance

NEW YORK.—*Matter of Roettger*, Supreme Court, Suffolk Court, Suffolk County, reported in New York Law Journal, December 9, 1941, page 1891.

This is an application for a permit to construct stores, with apartments in the rear, on petitioner's premises. The only objection to the granting of the permit is that the property in question is in the process of a zoning change, a public hearing in connection with which is to be held on December 8, 1941; with relation to which the Court says:

"Of course it cannot be determined beforehand what action will be taken at that meeting or subsequently, and in any event the court must determine petitioner's rights as of the present time."

The court therefore ordered the issuance of the permit.

EDITOR'S NOTE: There are many cases with regard to the legality of delaying the issuance of a permit on account of the pendency of a change in the zoning ordinance; see the Texas case of *Connor* v. *City of University Park* in these Notes for January, 1941, and the New York case of *Dubow* v. *Ross* in our May, 1941, Notes.

Zoning Ordinances—Set Backs

PENNSYLVANIA.—*Scholl* v. *Borough of Yeadon*, Superior Court, April 29, 1942, reported 26 Atl. (2d) 135.

The zoning ordinance in question established set-back building lines varying from 3 to 10 feet on two separated blocks in the business section of the Borough. On the two intervening blocks there were no set-back lines laid down.

The establishment of proper set-backs is within the legitimate field of the police power; but the ordinance in question is invalid for lack of uniformity in its applications; and is discriminatory because it does not operate on all alike.

To Eliminate Non-Conforming Uses

The Urban Institute in its News Bulletin of July 1, 1942, states that "time zoning, positive zoning, or retroactive zoning—as it is variously termed—has been given additional impetus in a recent enactment of the General Assembly of Virginia. House Bill Number 201, which amends a Virginia Act of 1926, specifically provides that:

Reasonable regulations may be adopted by councils or other governing bodies of cities and towns of the Commonwealth for the gradual elimination of uses of land and buildings that do not conform to such (zoning) regulations and restrictions.

"A provision in an ordinance of the City of Cleveland which requires the removal of unenclosed junk yards and auto dismantling yards from all land not within a first or second industrial district within eighteen months after the effective date of the ordinance (December 30, 1937) was recently contested. This provision in the Cleveland ordinance was sustained by the Ohio Court of Appeals in April of this year."

Municipal Law Notes and Decisions

Prepared by National Institute of Municipal Law Officers, Washington, D. C.
Charles S. Rhyne, Executive Director

Attorney's Fees—City's Authority to Incur—Note Given in Payment

A municipal corporation has implied authority to employ counsel to represent it at a hearing resisting the petition seeking its dissolution and a note given by the city in payment of such legal services is a validly incurred obligation. *Carter* v. *Town of Muscle Shoals*, 7 So. (2d) 74 (Ala. March 19, 1942. Reh. Den. April 9, 1942).

Blasting—Injury to Private Property

Owner of property within vicinity of blasting operations conducted by the city in a stone quarry located in a city park recovered damages for injury to his building resulting from such activity of the city. *Crino* v. *City of Campbell*, 41 N. E. (2d) 583 (Ohio App. Oct. 31, 1941. Just released for publication).

Bonds—Municipal Power Plant—Vote on Issuance of

An ordinance calling a bond election for the purpose of issuing bonds to construct a municipal power plant and a ballot submitted to the voters pursuant thereto did not truly specify the purpose for which the money was to be used when they did not disclose that a Federal grant was to be received and that the bond issue was not to cover the entire cost of the proposed plant, so the bond election is invalid. *Borin* v. *City of Erick et al.*, 125 Pac. (2d) 768 (Okla. April 14, 1942. Reh. Den. May 12, 1942).

Building Code—Nuisance—Denial of Repair Permit

Denial of a permit to repair a business building, which is a non-conforming use in a residential area, cannot be based upon a claim that to grant the permit would permit violation of an injunction enjoining certain nuisance phases of the business, as other phases of the business can operate without violation of the injunction. *Fidelity Laboratories, Inc.* v. *Oklahoma City*, 125 Pac. (2d) 757 (Okla. May 5, 1942).

City Councilman—Removal from Office for Misuse of City Automobile

A city councilman who drove a city-owned automobile from Los Angeles to Montana was properly removed from office for "willful misconduct" in office. *People* v. *Harby*, 125 Pac. (2d) 874 (Cal. App. May 7, 1942).

City Councilmen—Misconduct in Office—Indictment and Removal

Former city councilmen of the City of Chester, Pennsylvania, could be indicted for malfeasance in office after having been removed from office for voting themselves a salary as members of the Chester Municipal Housing Authority. *Commonwealth* v. *Peoples et al.*, 26 Atl. (2d) 125 (Pa. April 29, 1942. Reh. Den. May 21, 1942).

Civil Service—Fireman—Claim for Additional Salary

Member of a city fire department for six years, appointed from a civil service eligible list, is not entitled to additional salary and overtime pay granted members of fire and police departments in cities having a population in excess of 75,000 by statute, where city failed to create the position of fireman by ordinance as required by the said statute. *City of Dallas* v. *McGuire*, 159 S. W. (2d) 958 (Tex. Civ. App. Jan. 23, 1942. Reh. Den. March 6, 1942).

Claims—Notice of—Statutory Time Limit—Injury Causing Incapacity

Failure to file statutory notice of claim against city for personal injuries, including a brain injury allegedly resulting in loss of memory, within time limit presents a question of fact for the jury to determine whether the explanation for the delay in filing the claim was credible and entitled plaintiff to additional time to perfect his claim. *Hillborg* v. *City of New York*, 34 N. Y. S. (2d) 153 (N. Y. Sup. Ct. App. Div. April 17, 1942).

Contracts—City Official—Removal for Interest in—Denial of Reinstatement on Gambling Charges

A superintendent of street maintenance who was directly, financially and beneficially interested in public contracts contrary to the provisions of the Los Angeles City Charter was properly removed from office. The superintendent's application for reinstatement was properly denied on the different ground that he is known to have engaged in gambling for high stakes and is therefore not a fit and suitable person for the position to which he sought reinstatement. *Meyer* v. *Board of Public Works of City of Los Angeles*, 125 Pac. (2d) 50 (Cal. App. April 27, 1942).

Mayor—Misconduct in Office—Indictment and Removal

Former Mayor of the City of Chester can be indicted for malfeasance in office even though already punished by automatic removal from office when he voted, as a member of the City Counsel, in favor of salaries for members of the Chester Municipal Housing Authority, of which he was a member. *Commonwealth* v. *Peoples*, 26 Atl. (2d) 125 (Pa. Super. Ct. April 29, 1942. Reh. Den. May 21, 1942).

Notice of Claim—Place of Injury

A notice of a claim for personal injuries which described the place of injury as a spot 90 feet from the place the injury occurred is fatally defective as the city cannot investigate a claim that a particular defect caused injury unless the place is stated with such specific particularity that it can locate the defect as the purpose of the notice is to allow the city to investigate the cause of the accident. *Kantor* v. *City of New York*, 34 N. Y. S. (2d) 652 (N. Y. Sup. Ct. N. Y. Co. April 13, 1942).

Parking Lot—City-Owned—Automobile Lost By

A city is liable in damages for loss of an automobile parked by owner on the city operated and owned parking lot. *Dunham* v. *City of New York*, 34 N. Y. S. (2d) 289 (N. Y. Sup. Ct. App. Div. April 20, 1942).

Parking Meters—Ordinance Authorizing Installation of Valid

An ordinance authorizing installation of parking meters on certain streets is sustained as a valid exercise of the police power. *City of Louisville* v. *Louisville Automobile Club*, 160 S. W. (2d) 663 (Ky. App. March 27, 1942).

Peddlers—Licensing Ordinance Applied to Religious Sect

An ordinance requiring peddlers to obtain a license to sell any wares, goods, or merchandise within the city is invalid when applied to members of a religious sect engaged in selling religious pamphlets as infringing upon the freedom of the press secured by the Federal and State Constitutions. *City of Blue Island* v. *Kogul*, 41 N. E. (2d) 515 (Ill. March 17, 1942. Reh. Den. May 13, 1942).

Sewers—Municipal Regulation Requiring Connections

Municipal ordinance requiring connection with the city's sewer system is invalid as being in conflict with a State law providing that a building owner could not be required to connect with a sewer more than 300 feet from his property. *Bennett* v. *City of Hope*, 161 S. W. (2d) 186 (Ark. April 27, 1942).

Sidewalks—Fall Caused by Catching Heel in Hole

Recovery of damages allowed against city for injuries resulting in death of a pedestrian who fell upon a public sidewalk by reason of catching the heel of her shoe in a hole therein approximately 4 inches deep and 8 inches in diameter when the hole was shown to have existed for 4 or 5 months prior to the mishap. *Kandrosky* v. *City of McKeesport*, 25 Atl. (2d) 793 (Pa. April 13, 1942. Reh. Den. May 11, 1942).

Streets—Automobile Accident Caused By Defect Inherent in Plan of Construction

Recovery of damages is allowed against City for injuries sustained in an automobile accident caused by a defect in the street arising from a dangerous condition inherent in the plan of construction of a catch basin. *George* v. *City of Los Angeles*, 124 Pac. (2d) 872 (Cal. App. April 17, 1942).

Taxation—Priority of Federal Estate Tax Lien on Decedent's Estate Over City's Tax Claim

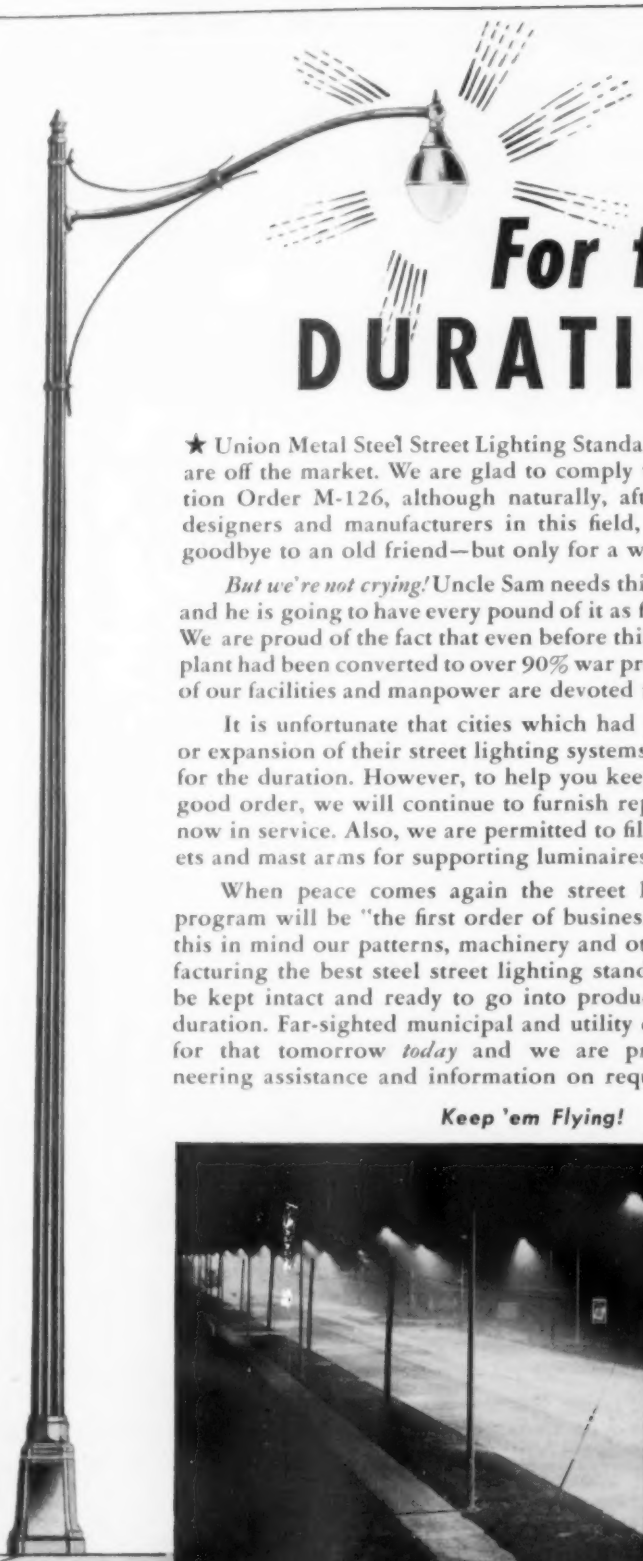
The lien of the Federal government on the estate of a decedent for the Federal Estate Tax is entitled to priority in payment over the liens of the State of Michigan, the County of Wayne and the City of Detroit for any unpaid taxes occurring after date of the death of the decedent. Any laws of Michigan contrary to the Federal Law are not controlling. *Paul* v. *United States*, 127 Fed. (2d) 64 (U. S. C. C. A. 6th April 8, 1942).

Taxation—Valuation of Realty for Assessment Purposes

Assessment made by Town of Eastchester on real property is changed from amount of sales price thereof to true market value as indicated by expert witnesses, where the evidence showed an active market for realty in that locality and the sale in question was made by a bank for all cash. *People* v. *Schiniedel*, 34 N. Y. S. (2d) 493 (N. Y. Sup. Ct. App. Div. April 27, 1942).

Tourist Camps—Regulation of—Jurisdiction of Courts

A declaratory judgment enjoining enforcement of a city ordinance licensing and regulating tourist camps cannot be appealed to the Supreme Court of Missouri in the absence of a finding by the lower court that the ordinance is unconstitutional rather than merely in excess of the powers of the city. This case is transferred to the St. Louis Court of Appeals on the ground that the real basis of a lower court decision enjoining enforcement of the ordinance was that the city's delegated powers did not include the authority to enact the tourist camp ordinance. *Juengel* v. *City of Glendale*, 161 S. W. (2d) 408 (Mo. May 5, 1942).



For the DURATION

★ Union Metal Steel Street Lighting Standards for new installations are off the market. We are glad to comply with General Conservation Order M-126, although naturally, after 35 years as leading designers and manufacturers in this field, we feel we are saying goodbye to an old friend—but only for a while.

But we're not crying! Uncle Sam needs this steel for the war effort and he is going to have every pound of it as far as we are concerned. We are proud of the fact that even before this Order was issued, our plant had been converted to over 90% war production and now 100% of our facilities and manpower are devoted to aiding the war effort.

It is unfortunate that cities which had planned modernization or expansion of their street lighting systems will have to "sit tight" for the duration. However, to help you keep present equipment in good order, we will continue to furnish repair parts for standards now in service. Also, we are permitted to fill orders for pipe brackets and mast arms for supporting luminaires.

When peace comes again the street lighting modernization program will be "the first order of business" in many cities. With this in mind our patterns, machinery and other facilities for manufacturing the best steel street lighting standards in the world will be kept intact and ready to go into production at the end of the duration. Far-sighted municipal and utility executives are planning for that tomorrow *today* and we are prepared to offer engineering assistance and information on request. Write for catalog.

Keep 'em Flying!

The UNION METAL Manufacturing Co.

Canton, Ohio

THE Night Has a Thousand Eyes, all variations of our day eye and our night eye. Our day eye we are all familiar with—if we don't see well in the daylight, our eyes are defective; if we can't make out a traffic sign, the trouble may be either in the sign or in our sight. The sign may be too small, as it often is.

Our night eye was discovered in the laboratory some years ago. "Night eye," reads as simply as "day eye," but consider for a moment the difference between day and night. The rainiest day is lighted by thousands of footcandles, whereas the brightest night is illumined by less than one footcandle.

It takes 30 minutes in the dark for night eye to develop. Then you will see as well in the dark as you will ever see in the dark. But to the motor-vehicle driver, darkness is the least of his troubles; what he is worried about is getting past those oncoming headlights. The approaching driver feels the same misgiving. An added hazard in this meeting, which may occur hundreds of times on an evening's journey, is that 15 per cent of us have light-sensitive eyes: a blast of light leaves us partially blind. Recovery usually takes about 15 seconds, though it is longer in some cases. It is during this period of recovery that accidents happen.

Traffic Safety Lighting

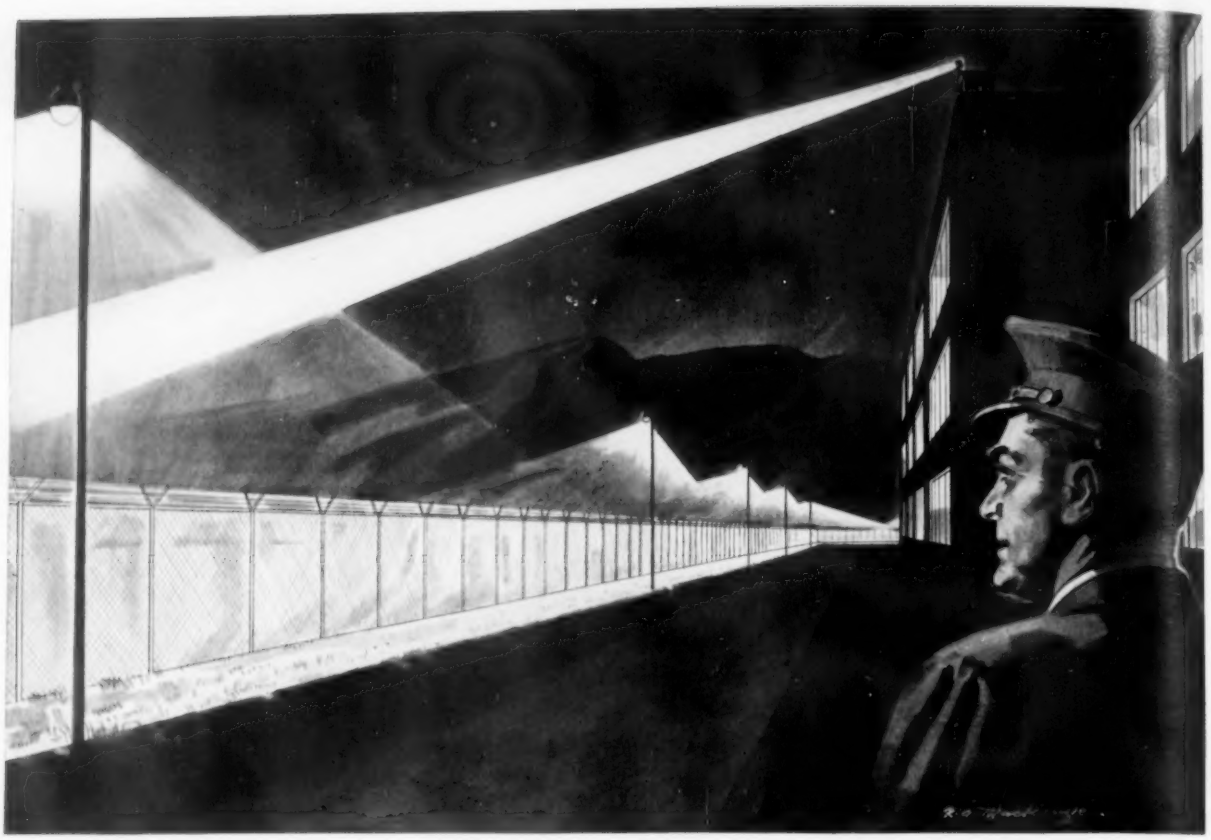
Traffic safety lighting was designed and publicized to overcome this and other night hazards, to permit the familiar day eye to guide the wheel at night. At present, however, there is a tug of war between those who would ration street lighting down to one lump per pot and those who, like Governor Charles Edison of New Jersey, regard it as part of the modern apparatus of industry. In addition, drivers and pedestrians are confronted by blackouts, dimout areas, and the usual residential and rural stygian ways punctuated by blasts of light from brother drivers.

The most unrelieved condition is a black top roadway with shrubbery coming down to the street's edge. The maximum contrast is a black top in a white desert, where the meeting of black and white furnishes a reflecting line as a guide for the driver.

Curb and Route Delineation

Where there can be no present additional street or highway lighting, there is available a tested method for creating an all-important marginal guide. This method of installing indicating reflectors on 6-foot posts 100 feet apart and 8 feet to the right of the roadway edge was tried out successfully on 60 miles of Michigan state highway

Through the right-hand windshield at the top of this page, your keen sight can make out the big Joliet-Chicago sign shown above. Above left are two sizes of Lucite oval reflectors, the upper 1¼ inches long, the lower 2½ inches long



NIGHT WATCH—U. S. A.

For men and women on the night shift, light is doing a lot of ingenious things these days indoors and out to help win the battle of production. None is more significant than the long rows of lights that safeguard continuous flows of war materials.

In applying protective lighting for war industries, an intense light is directed outward from plant buildings and fences—exposing intruders to instant detection. Stretching for miles in many cases, these Westinghouse lighting systems are standing watch around factories large and small, ordnance plants, shipyards, proving grounds, oil fields and refineries, dams and power stations.

Outdoor lighting that provides wide walls of safety for men, machines and materials, we at Westinghouse call *engineered seeing*. It is illumination from scientifically designed lighting equipment, expertly applied to achieve night-after-night plant protection. Today, our single-purpose job is to combine Westinghouse research, technical skill, and lighting experience in *engineered seeing* for America's war industries.

At our Lighting Division in Cleveland, we are producing floodlights, aviation lighting units, industrial and commercial fixtures, and street and highway luminaires. This broad lighting line is available through 117 Westinghouse Electric Supply Company Offices and Independent Lighting Distributors.

★

This is the Westinghouse SG-10 Refractolux, specifically designed for nighttime protective lighting. It combines a steel-protected silvered glass reflector with advanced methods of light control. Maintenance and servicing can be performed simply and safely

★

Westinghouse *Lighting Equipment*

Delineator treatment of horizontal and vertical curves

four years ago and is still in place here and also on 140 additional miles of major highway. These indicators are shown at the top of this article, together with a closeup of the head consisting of reflectors of the famous Lucite plastic developed by E. I. du-Pont de Nemours, Inc. These indicators were designed and manufactured by Signal Service Corporation, Elizabeth, N. J., and installed in Michigan for Murray D. Van Wagoner, then state highway commissioner and now Governor of Michigan. In the July 1938 issue of THE AMERICAN CITY, Commissioner Van Wagoner described the results of this reflector installation as follows: "A special survey of motorists using this highway since the installation reveals that 97 per cent of them have reacted favorably."

This method is stepping forward for speedy consideration, not as a substitute for street or highway lighting, but as an indicating or direction system in its own right. It has two obvious values: as a road marker where there is no permanent lighting, and as a guide along a given route—"follow the indicators." The first value should be obvious. The second value will be recognized by traffic engineers, transportation administrators, police chiefs, public safety directors, mayors, and civilian defense officials. Take a map of your city and spot the war plants, loading docks for incoming supplies such as milk and other foods, hospitals, civilian defense depots, and then delineate by Lucite indicators the significant routes. Then the night will have its own thousand eyes to aid those of the drivers within, around, and through each city.

The latest hazard is the dimout area on reaching which the driver must turn off his headlights and proceed in darkness. Varying degrees of blindness ensue. If these indicators were installed on all roads within the dimout area, the abruptness of the darkness and the task of threading the dim streets and roads would be lightened. The photograph at the top of this page suggests the essential advantages of having such a guide immediately available.

British War Relief Society

Truckers Told to Meet Coastal Black-Out Rules

WASHINGTON, July 15 (AP).—The Interstate Commerce Commission today ordered all motor carriers subject to its jurisdiction to comply "as fully as possible" with dimout and blackout regulations in coastal areas.

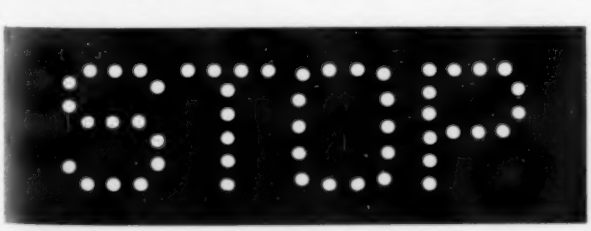
Since dimout and blackout regulations have various origins, the commission said, it is possible they may lack uniformity and that motor carriers may experience difficulty in complying with all requirements.

"Nevertheless," the order said, "it is the duty of motor carriers subject to the motor carrier safety regulations, operating in a coastal area or areas, to comply as fully as possible with Army orders and local regulations which restrict the use of lighting devices, reflectors and emergency signals."

The commission said any motor carrier complying with Army and local regulations would not be deemed to be in violation of any of the I. C. C. safety regulations.

The commission issued its order after receipt of a letter from F. H. Farnum, director of the Maine Civilian Defense Council, who reported "considerable difficulty" in controlling motor vehicle lights under dimout regulations.

Below are 24-inch stop signs with 6-inch letters; are reflectorized by (left) ¾-inch (No. 3) reflector buttons and (right) 1¼-inch oval reflectors. Step away 15 feet and compare the visibility of these two jobs



Officially Approved Blackout Luminaire

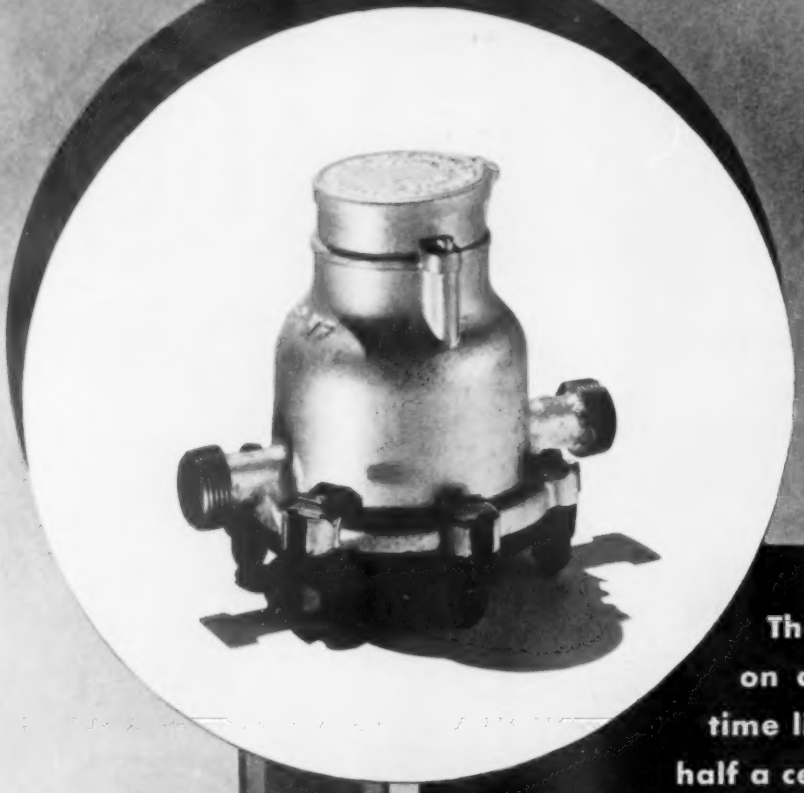
A NEW blackout street-lighting luminaire, approved by the War Department, is announced by the General Electric Co. The luminaire uses no glass and a minimum of metal, contains a 9-watt lamp invisible from above, and reveals an object 40 feet distant. Spacings recommended are 100 feet minimum and 150 feet maximum, mounting height 15 feet and not over 19 feet. The luminaire is for use on multiple circuits only and is intended to burn continuously.

New Glass Floodlight

A NEW shatterproof glass floodlight combining the high reflectivity of silvered glass with unusual resistance to shock has been announced by the Lighting Division of the General Electric Co.

The reflector is joined to a metal socket housing sealed with a heat-resistant gasket which together make the floodlight corrosion-proof. Door glass and gasket fit solidly against the reflector, further assuring protection against water, dust, or dirt.

The luminaire is constructed of iron and stable plastic material. In the event of a raid, the absence of glass is an added advantage. Because of its light weight and the 18-inch bracket that comes with it, the luminaire can be installed easily in almost any location.



The name "HERSEY" takes on a new significance at a time like this. For more than half a century, waterworks officials have come to rely on HERSEY Meters, not only for their accuracy, but also for their remarkable low-cost maintenance.

HERSEY
MANUFACTURING COMPANY
SOUTH BOSTON, MASS.

BRANCH OFFICES: NEW YORK — PORTLAND, ORE. — PHILADELPHIA
ATLANTA — DALLAS — CHICAGO — SAN FRANCISCO — LOS ANGELES

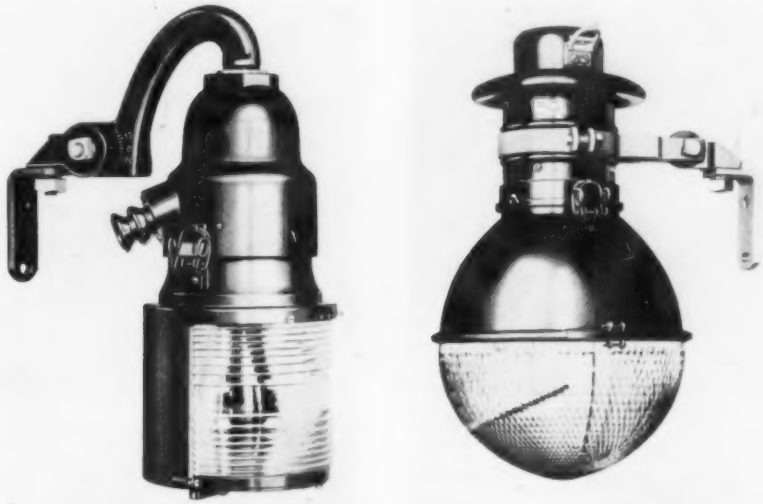
HERSEY

Facts about Protective Lighting

• • • ▬ Protective Lighting is nothing new — it is simply another adaptation of outdoor lighting equipment regularly used for street and highway lighting, sport field lighting and building floodlighting. Outdoor lighting, due to modern requirements of traffic and greater night activities, has continuously advanced to its present high efficiency of light output. Light is scientifically controlled by glass prism refractors and reflectors to throw any desired light pattern on the area, such as symmetric distribution, C-Sym-Etric distribution, 2-way distribution, or 3-way distribution. Selecting the proper luminaire, the correct location, the right mounting height and spacing, efficient lighting can be obtained along a fence with area beyond fence, on buildings and work areas, in the streets and alley-ways of property, into dark areas of building recesses and at fence corners and area corners of property offering the most effective protective lighting with most economical light output — saves power, saves property.

THE above simple exposition is from a new booklet available from Line Material Co., Milwaukee, Wisc., which for varying conditions explains the correct luminaire, mounting heights and spacings, standards, brackets and mastarms, wiring diagrams, circuit control, and protective equipment.

Efficient layouts for defense lighting require a study of each existing condition to determine what type of controlled light pattern is most desirable at every location of your water-works, sewage or electrical plant, or of some war-industry plant, which your police department wishes were protected by planned lighting. Effective lighting of property offers the guards advantageous visibility at any time and in every direction to insure against entrance of intruders. Each point of property should be lighted by two light sources because when one light fails to burn, the installation should not lose its effectiveness. This is economically accomplished through well-planned locations, spacings, and mounting heights. Effective lighting, in addition, requires consideration of present surrounding conditions such as traffic and transportation ways, residences, open fields, and existing illumination. Should your system be wired series or multiple? What type of controlled light do you need? What mounting arrangements should you use? Data for answering these and other questions in connection with protective floodlighting are presented in "Light Up To Protect War Production."



Two types of Protective-lighting luminaires fitted with new adjustable brackets for pole mounting

Above are shown two types of protective-lighting luminaires, each fitted with adjustable brackets for pole mounting. At the left is the Fresnel luminaire for lighting open land adjacent to property. At right is a Prismalite luminaire suitable for almost every protective-lighting use because of the selection of refractors and globes. The pendant bracket at left has general application. The clamp-around type has special protective features in the event of breakages.

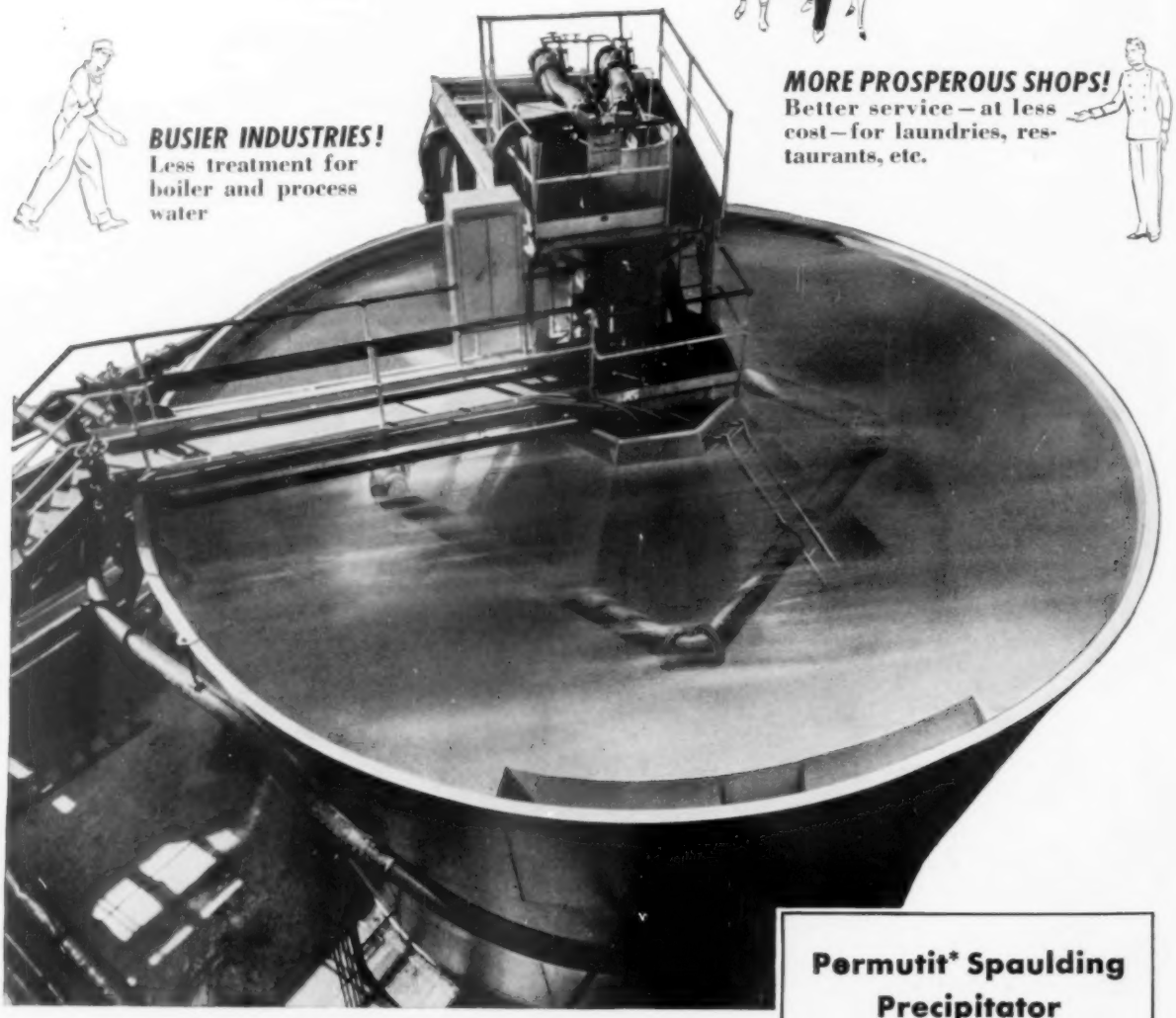
A BRIGHTER FUTURE FOR YOUR CITY

—in soft, clear, iron-free water

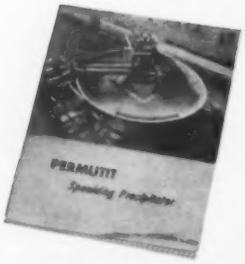
HAPPIER HOMES!
Soft, clear water means less work, more fun

BUSIER INDUSTRIES!
Less treatment for boiler and process water

MORE PROSPEROUS SHOPS!
Better service—at less cost—for laundries, restaurants, etc.



Plan now for better water



After the war, when public improvements are resumed, a good water supply will be the first thought of many communities. Take the first step toward this modern necessity *now*. Write for free booklet to The Permutit Company, Dept. G3, 330 West 42nd Street, New York, N. Y. In Canada: Permutit Company of Canada, Ltd. . . Montreal . . Toronto . . Winnipeg . . Calgary.

*Trademark Reg. U. S. Pat. Off.

Permutit* Spaulding Precipitator

Here's a new type of equipment that puts soft water within reach of every community. It makes cold lime soda treatment more practical than ever before, because it takes only half the space of old-type plants, cuts precipitation time, makes big savings in chemicals.

PERMUTIT

WATER CONDITIONING HEADQUARTERS

Buy War Bonds and Stamps. Help win the war for FREEDOM.

Municipal and Civic Publications

Please mention THE AMERICAN CITY when ordering

Power Shortage

Will Electric Power Be a Bottleneck?—By Louis Marlio. The Brookings Institution, Washington, D. C. 1942. 67 *pp.* 50c.

Summary of an analysis of the American electric power situation—estimated war needs and the possible means of filling them. Chapter subjects: Description of the Power Industry; Power Requirements for the War Economy; Curtailment and Regulation of Power in War Economy; Utilization of the Existing Power; Increase in the Generating Capacity of Power; Possibility of Achieving Equilibrium between the Demand for Power and the Output.

Wartime Fire Protection

Training Manual for Auxiliary Firemen.—Edited by Horatio Bond, Chief Engineer, National Fire Protection Association, W. Fred Heisler, Research Specialist, Department of Trade and Industrial Education, and R. J. Douglas, Assistant Professor of Firemanship, School of Technical Training, Oklahoma Agricultural and Mechanical College. National Fire Protection Association, 60 Batterymarch St., Boston, Mass. 1942. x + 406 *pp.* $1.50.

A manual of recommended practices for training auxiliary firemen, worked out by experts after many years of experience. Four main courses are contained in the volume: civilian-defense courses; and primary, second, and supplementary firemen's training courses.

Paying for City Streets

The Financing of Urban Streets.—By Frederick N. MacMillin, Executive Secretary, League of Wisconsin Municipalities, 30 E. Johnston St., Madison, Wis. 1942. 15 *pp., mimeo.*

A statement by the American Municipal Association presenting facts and problems involved in financing urban streets—particularly the extent to which motor-vehicle revenues are used for this purpose—with recommendations.

Police Department Operation

The St. Louis Police Survey.—By Governmental Research Institute, 769 Paul Brown Bldg., St. Louis, Mo. Assisted by Bruce Smith, Police Consultant. 1942. 133 *pp.*

Report of a survey of the history, organization, and functioning of the St. Louis Police Department, with recommendations for improvements in the operation of the department which the authors believe would result in a cost reduction of a quarter million dollars a year.

Community Health Buildings

Public Health Centers.—pp. 63-78, *July,* 1942, *issue of the* Architectural Record, 119 *W. 40th St., New York.*

Performance and design standards for four types of health centers for communities of 30,000, 60,000, and 100,000, prepared by the United States Public Health Service, including estimated clinic loads and schedules for each of the four types, and design data for the various center units.

Association Directory

Trade and Professional Association of the United States.—By C. J. Judkins U. S. Department of Commerce, Washington, D. C. Apply to Supt. of Documents, Washington, D. C. 1942. *vi* + 324 *pp.* 70c.

A directory of approximately 3,000 national and interstate trade associations, grouped by business fields; listed according to cities, secretaries, and commodities. Data included on size of staff and membership, and services offered to members in 1940-41.

Parking Study

The Parking Problem—A Library Research. —The Eno Foundation for Highway Traffic Control, Saugatuck, Conn. 1942. 64 *pp., mimeo.*

An analysis of the many surveys and studies which have been made of the parking problem, and a correlation of the various points of view presented by them; covering the history of parking practices, parties affected by parking, on-street and off-street parking, relation between parking vehicles and vehicular movement, economies and costs, enforcement and legal aspects.

War Transportation Planning

Two more publications on the problems presented by the present transportation emergency:

Conservation of Vital War Transportation.—Office of Defense Transportation, Division of Local Transport, Washington, D. C. 1942. 35 *pp., offset.*

A practical manual of procedure and methods for the conservation of existing public and private transportation facilities.

War Production Transport.—Reprinted from Traffic Engineering, *April,* 1942, *published by the Institute of Traffic Engineers, 60 John St., New York.* 23 *pp.* 10c.

Suggestions for making more effective use of present transportation facilities by: staggering hours; corrective traffic engineering methods; and more effective use of private automobiles.

City Employees

Two publications of the Municipal Finance Officers Association, 1313 E. 60 St., Chicago, Ill.:

Salary and Wage Increases by 384 United States Cities during 1941.—By Carl H. Chatters and Margorie Leonard. 1941. 4 *pp., offset.* 15c.

Data on amount and type of salary and wage increases of municipal employees in 1941, obtained from answers to a questionnaire.

Retirement Plans for Public Employes.—Published under Auspices of Committee on Public Employe Retirement Administration of the Municipal Finance Officers Association. 1942. 12 *pp., offset.* 25c.

Principles and methods for the establishment of an adequate retirement system for public employees.

Recreation Developments

Year Book Number of Recreation, June, 1942.—*National Recreation Association, 315 Fourth Ave., New York.* 63 *pp.* 50c.

A record of trends and developments in community-recreation expenditures, facilities, personnel, and services, during 1941, with 36 pages of summary tables.

City Financial Data

Financial Statistics of Cities: 1940—*Volume 2: Analytical Reports.—Bureau of the Census, Department of Commerce, Washington, D. C.* 1942. 8 *pp.*

Summary financial data for cities of over 100,000 population—the 92 largest cities in the country—for the fiscal year of each ending in 1940.

Surety Bonds

City Surety Bond Survey.—Data Gathered by the New York State Conference of Mayors and Other Municipal Officials, Albany, N. Y. 1942. 34 *pp., mimeo.*

Data on surety-bond procedures by New York municipalities, including amount paid in premiums, amount of bonds, and amount paid by surety companies to cities.

Transition from War to Peace

When Demobilization Day Comes.—National Planning Association, 800 21st St., N. W., Washington, D. C. 1942. 35 *pp.* 25c.

A brief discussion of problems which will confront the nation when demobilization day comes, intended to serve as a framework for future discussion. Future pamphlets will deal in more detail with some of the problems presented here: demobilization of the armed forces, of the war economy, wartime economic controls, agriculture, federal fiscal policy; and problems involving international aspects of the situation, and long-range goals.

British Housing and Planning

Town and Country Planning—A Study of Physical Environment, the Prelude to Post-War Reconstruction.—By Gilbert McAllister and Elizabeth Glen McAllister, with a foreword by The Rt. Hon. Arthur Greenwood, M.P. Faber and Faber Limited, 24 Russell Square, London, England. 1942. xxxii + 176 *pp.* 12s. 6d.

A history of the development of housing and urban and rural planning in England during the last 100 years—information for the layman, to serve as background for projected large-scale reconstruction after the war. Chapter headings: Physical Environment, Some Social Consequences; A Hundred Years of Housing Progress; Housing Standards and Design; Building Costs; The Organization of the Building Industry; Housing Between the Wars; Housing for the Family; Towns for Healthy Living and Industry; Town and Country Planning; National Planning.

Intergovernment Relations

State Supervision of Local Government—Its Development in Massachusetts.—By Dale Pontius. American Council on Public Affairs, 2153 Florida Ave., Washington, D. C. 1942. *xi* + 165 *pp.* $3.25, *cloth edition;* $2.75, *paper edition.*

A study of the developments of various types of state supervision of local government functions in Massachusetts—developments which have been followed in many cases by other states in the country.

City Government Development

The Growth of a City Government.—By Lent D. Upson, with Organization Charts prepared by Robert D. Fleischer. School of Public Affairs and Social Work of Wayne University, Report No. 36. Published by the Detroit Bureau of Governmental Research, 5135 Cass Ave., Detroit; Report No. 164. 1942. 27 *pp., offset.*

A study dealing with the nature and date of origin of activities of the Detroit city government from 1824 to the present time, with organization charts for the five charter years.
(See p. 42 of this issue of THE AMERICAN CITY.)

Ordinance Codification

The Codification of Ordinances in Wisconsin Cities and Villages.—League of Wisconsin Municipalities, 30 E. Johnson St., Madison, Wis. 1942. 50c. 21 *pp., mimeo.*

An outline of procedure for the codification of ordinances.

Chatham Village Anniversary

1942—*The First Ten Years.—July 3,* 1942, *issue of Chatham Village News, Chatham Village, Pittsburgh, Pa. pp.* 1-4.

A look back and evaluation of the first ten years of Chatham Village—one of the earliest and most successful of the country's large-scale planned housing developments.

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59 MAIDEN LANE NEW YORK CITY

City-Management Practices

Management Methods in City Government—A Survey of the Best Administrative Practices in Council-Manager Cities.—By Orin F. Nolting, Assistant Director, International City Managers' Association, 1313 E. 60th St., Chicago, Ill. 1942. *v* + 60 *pp.* $1.50.

A reprint of a series of articles on management methods which ran serially in *Public Management*, setting forth a composite of the best management practices developed by city managers in office. The ten chapters cover: safeguarding managerial time; selection of department heads; direction and control of activities; records and reports; administrative codes, rules, and regulations; training; research and planning; relations with the council and other local governments; public relations.

Wartime Building Standards

Recommended Building Code Requirements for New Dwelling Construction with Special Reference to War Housing.—Prepared by the Subcommittee on Building Codes of the Central Housing Committee on Research, Design, and Construction, Washington, D. C. 1942. 109 *pp., mimeo.*

Prepared by a committee representing federal agencies concerned with various aspects of housing, suggested building code requirements for dwellings, taking account of restrictions necessitated by wartime material shortages.

Housing Standards

Minimum Requirements for Family Dwelling.—Social Service Housing Committee, 105 E. 22d St., New York. 1942. 6 *pp., mimeo. Free.*

Standards for use by family agencies covering safety, hygienic facilities, air and light, privacy and overcrowding, protection from the elements, livability, and neighborhood conditions.

Trailer Regulation

Report of Auto Courts and Trailer Camps inside Incorporated Areas.—Division of Immigration and Housing, State Building, Los Angeles, Calif. 14 *pp., mimeo.*

Analysis and summary of 261 answers received from questionnaires sent to incorporated communities in California on the way in which they are regulating auto courts and trailer courts within their boundaries.

Building Safety

Modern Building Inspection—"The Building Inspector's Handbook."—With text by Clyde N. Dirlam, Associate Member A.S.C.E., Harold P. Huls, City Attorney, Pasadena, Calif., and others. Compiled, edited and arranged by R. C. Colling, Technical Advisor, and Charles D. Wailes, Jr., Mem. A.S.C.E., R. C. Colling and Associates, Los Angeles, Calif. 1942. *x* + 404 *pp.* $5.00 *from* THE AMERICAN CITY.

A comprehensive handbook on modern building-inspection practice, divided into three main parts—The Building Inspector and His Job; Structural Engineering for the Building Inspector; and Legal Problems in Connection with Building Code Enforcement. An Addenda contain selected ordinances; basic standards and procedures; selected annotated bibliographies; and a directory.

Inspection Standards

Manual of Inspection.—Office of the Comptroller, City of New York. 1942. 480 *pp.* $1.50.

A guide to effective inspection of materials, supplies, and equipment purchased for the city of New York, covering operation and organization of the Division of Inspection, forms used, and inspection standards. Applicable to other cities.

Housing Developments

Housing Yearbook, 1942.—Coleman Woodbury, Edmond H. Hoben, Editors. National Association of Housing Officials, 1313 E. 60th St., Chicago, Ill. viii + 192 *pp.* $3.00.

An "economy yearbook," smaller than others of recent years, this annual nevertheless contains much valuable information on what happened in the housing field in 1941 and up until the reorganization of the federal housing agencies. It outlines activities and accomplishments of official and unofficial national agencies and developments in housing priorities and rent control. A directory of housing agencies is included.

Los Angeles Planning

Cities Are for People—The Los Angeles Region Plans for Living.—By Mel Scott. Designed by Alvin Lustig with Drawings by Bob Holdeman. Publication XXI of the Pacific Southwest Academy, Los Angeles, Calif. 1942. 110 *pp.* $1.50.

Anyone who thinks that the planning concept cannot be exciting, stirring, challenging, should read this strikingly illustrated account of the development of Los Angeles from its beginnings, of the progress of planning in this city, and of the planning problems which remain to be solved. Written with the purpose of soliciting citizen interest in and support of planning for the Los Angeles area, it has been adopted as a textbook in the schools.

Rebuilding the Lower East Side

The Relation of Tax Delinquency in Slum Areas to the Housing Problem—Report and recommendations of the Committee on Taxation, together with the Research Report, forming the basis thereof, prepared by Phil Thorson, under the direction of Paul Studenski. Citizens' Housing Council of New York, Inc., 470 Fourth Ave., New York. 1942. 35 *pp., mimeo.* 50c.

A study of the financial aspects—the extent, causes, and effects—of the extreme blight of a 25-block area on the lower east side of Manhattan—one of the worst slums in New York City; and recommended definite steps for an over-all rebuilding of the area.

Rebuilding Central Areas

Proposals for Downtown Detroit—A Digest of a Report by Carl S. Wells, M.A.I., President, Homer Warren & Co., Detroit, Mich., for The Urban Land Institute, 1737 K St., N. W., Washington, D. C. 1942. 31 *pp., mimeo.*

An investigation into the evidences and causes of decline in the central business district of Detroit, and recommended action to counteract this decline—one of the series of reports by the Urban Land Institute on decay in central districts of American cities.

Training Recreation Workers

Training Volunteers for Recreation Service.—Prepared by George D. Butler for the National Recreation Association, 315 Fourth Ave., New York. 1942. 57 *pp., offset.*

An outline of recommended methods for training volunteers for recreation work, illustrated by descriptions of typical courses given in several communities.

Urban Consolidation

Town and City Consolidation in Connecticut.—pp. 492-502, *June,* 1942, *issue of the American Political Science Review,* 450-458 *Ahnaip St., Menasha, Wis.* $1.00.

A summary description and analysis of town and city consolidation in 21 towns in Connecticut: reasons for consolidation; procedures followed; legislation; features of the consolidation in the various towns; and an evaluation of the success of the achievements.

Defense Community Problems

Defense Communities—An Urgent Social and Religious Problem.—Prepared by Inez M. Cavert, Department of Research and Education, Federal Council of the Churches of Christ in America, 297 Fourth Ave., New York. June 27, 1942, *issue of* INFORMATION SERVICE. 8 *pp.* 10c.

An analysis of critical social and religious problems arising from the large increases in population in defense centers—problems of housing, health, education, vice, race relations, recreation—and the part of the church in alleviating these conditions.

Municipal Financial Problems

Wartime Financial Problems of Cities.—The United States Conference of Mayors, 730 Jackson Place, Washington, D. C. 1942. 34 *pp., offset.*

Talks and discussion by the Executive Committee of the United States Conference of Mayors on the financial problems of cities, with resolutions passed.

The principal participants in this symposium were: F. H. LaGuardia, Mayor of New York; Edward J. Kelly, Mayor of Chicago; Barnet Hodes, Corporation Counsel of Chicago; Robert Cutler, Corporation Counsel of Boston; Edward J. Jeffries, Mayor of Detroit; Howard W. Jackson, Mayor of Baltimore; Walter C. Chandler, Mayor of Memphis; George W. Welsh, Mayor of Grand Rapids; Walter Camenisch, Deputy Receiver of Taxes, Philadelphia; William Dress, Mayor of Evansville; C. D. Scully, Mayor of Pittsburgh; John B. Gage, Mayor of Kansas City, Mo.; Wilson W. Wyatt, Mayor of Louisville; C. A. Pickett, Mayor of Houston; John J. McDonough, Mayor of St. Paul; John Lindsay, Director of Finance, Louisville; C. R. Herbert, Director, St. Paul Bureau of Municipal Research; and Roger L. Putnam, Mayor of Springfield, Mass.

Pittsburgh Planning

Annual Report, City Planning Commission, Pittsburgh, Pa., 1941. 29 *pp., mimeo.*

Activities and progress of the Pittsburgh Planning Commission, with a history of city planning in this country and its relation to planning at other levels of government.

Other Reports Received

AUGUSTA, GA.—Year Book, City Council, 1941. 185 pp.

BANGOR, MAINE.—Annual Report, City Manager, 1941. 67 pp.

BROOKLINE, MASS.—Annual Report, Town Officers, and the Town Records, year ending Dec. 31, 1941. 470 pp.

CHAMBERSBURG, PA.—Annual Report, Burgess and Town Council, 1941. 79 pp.

CHICAGO, ILL.—The Annual Appropriation Bill for the year 1942. 151 pp.

—Annual Report, 1941, Chicago Plan Commission. 19 pp.

CHARLESTON, S. C.—Year Book, 1940. 257 pp.

CINCINNATI, OHIO.—Yearbook—Annual Report, City Manager, 1941. 93 pp.

LEWISTON, MAINE.—Municipal Activities—Defense Issue, 1941-42. 61 pp.

MILWAUKEE COUNTY, WIS.—Financial Summary, 1938-1941. 94 pp.

OGLESBY, ILL.—11th Annual Report, year ending Apr. 30, 1942. 55 pp.

PITTSBURGH, PA.—Housing in Wartime Pittsburgh, 1941-1942. Pittsburgh Housing Association. 30 pp.

SEATTLE, WASH.—Annual Report, Department of Lighting, year ending Dec. 31, 1931. 22 pp.

A Catalog of Publications in the Field of Public Administration, 1942. Public Administration Service, 1313 E. 60th St., Chicago, Ill. 1942. 31 pp.

Conservation of Natural Resources—A Supplementary List of References.—Division of Bibliography, The Library of Congress, Washington, D. C. 1942. 51 pp., mimeo.

Municipal Appropriations for Civilian Defense.—Bureau of the Census, Department of Commerce, Washington, D. C. 9 pp.

War Emergency and Civilian Defense Suggestions for Minnesota Municipalities.—League of Minnesota Municipalities, 15 University Library, Minneapolis, Minn. 1942. 47 pp.

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Conventions—When and Where

August 16-22.—Evanston, Ill.
NATIONAL INSTITUTE FOR COMMERCIAL AND TRADE ORGANIZATION EXECUTIVES. (Northwestern University.) Sec.-Treas., Clarence R. Miles, 832 First National Bank Bldg., Chicago, Ill.

August 17-19.—Des Moines, Iowa.
LEAGUE OF IOWA MUNICIPALITIES. (Savery Hotel.) Sec.-Treas., Frank G. Pierce, Marshalltown, Iowa.

August 21-22.—Bozeman, Mont.
MONTANA MUNICIPAL LEAGUE. (Baxter Hotel.) Annual meeting. Sec., M. J. Mee, 519 Birch Street, Anaconda, Mont.

September 5-5.—Cedar City, Utah.
STATE MUNICIPAL LEAGUE OF UTAH. (Escalante Hotel.) Sec., Tom McCoy, Public Safety Building, Salt Lake City, Utah.

September 9-11.—Chicago, Ill.
AMERICAN TRANSIT ASSOCIATION. (The Palmer House.) Sec., Guy C. Hecker, 292 Madison Ave., New York City.

September 9-11.—Traverse City, Mich.
AMERICAN WATER WORKS ASSOCIATION—MICHIGAN SECTION IN CONJUNCTION WITH MICHIGAN CONFERENCE ON WATER PURIFICATION. (Park Place Hotel.) Sec., M. N. Gerardy, Water Board Bldg., Detroit, Mich.

September 9-12.—Denver, Colo.
NATIONAL ASSOCIATION OF ASSESSING OFFICERS. Exec. Dir., Albert W. Noonan, 1313 E. 60th St., Chicago, Ill.

September 12-22.—Detroit, Mich.
AMERICAN CEMETERY ASSOCIATION. (Statler Hotel.) Annual convention. Vice-Pres., Roy Hatten, 408 South Oak Park Ave., Oak Park, Ill.

September 14-16.—Dickinson, N. D.
LEAGUE OF NORTH DAKOTA MUNICIPALITIES. Exec. Sec., Myron H. Atkinson, Bismarck, N. D.

September 15-16.—Boston, Mass.
NEW ENGLAND WATER WORKS ASSOCIATION. (Statler Hotel.) Sec., Frank J. Gifford, 613 Statler Bldg., Boston, Mass.

September 15-16.—Spartanburg, S. C.
SOUTH CAROLINA WATER WORKS ASSOCIATION Short School Meeting. Sec., J. H. Stephens, 418 State Office Bldg., Columbia, S. C.

September 16-18.—Lake Placid, N. Y.
MUNICIPAL ELECTRIC UTILITIES ASSOCIATION OF NEW YORK STATE. (Lake Placid Club.) Annual meeting. Sec., Howard C. Pearsall, P. O. Box 44, Freeport, L. I., N. Y.

September 17-18.—Cheyenne, Wyo.
AMERICAN WATER WORKS ASSOCIATION—ROCKY MOUNTAIN SECTION. (Frontier Hotel.) Sec., B. V. Howe, 201 Argonaut Hotel, Denver, Colo.

September 18.—Pittsburgh, Pa.
AMERICAN WATER WORKS ASSOCIATION—WESTERN PENNSYLVANIA SECTION. (Roosevelt Hotel.) Sec., E. P. Johnson, 418 Flannery Bldg., Station 13, Pittsburgh, Pa.

***September 20-22.—Los Angeles, Calif.**
CALIFORNIA SEWAGE WORKS ASSOCIATION. (Clark Hotel.) Annual convention. Pres., Fred D. Bowlus, 202 Law Bldg., Los Angeles, Calif.

September 21-22.—St. Louis, Mo.
ILLUMINATING ENGINEERING SOCIETY. Wartime Lighting Conference. (Jefferson Hotel.) Exec. Sec., Frank G. Horton, 51 Madison Ave., New York City.

September 21-25.—New York City.
INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE. Wartime Conference. (Pennsylvania Hotel.) Exec. Sec., Edward J. Kelly, 918 F. Street, N. W., Washington, D. C.

***September 21-25.—Topeka, Kansas.**
LEAGUE OF KANSAS MUNICIPALITIES. (Kansan Hotel.) Thirty-fourth annual convention. Exec. Sec., John G. Stutz, Lawrence, Kansas.

September 21-24.—Los Angeles, Calif.
LEAGUE OF CALIFORNIA CITIES. (Biltmore Hotel.) Sec., Richard Graves, 2121 Allston Way, Berkeley, Calif.

September 25-25.—Mammoth Cave, Ky.
KENTUCKY MUNICIPAL LEAGUE. (Mammoth Cave Hotel.) Exec. Sec., Carl B. Wachs, University of Kentucky, Lexington, Ky.

September 24-26.—St. Paul, Minn.
AMERICAN WATER WORKS ASSOCIATION—MINNESOTA SECTION. (Lowry Hotel.) Sec.-Treas., Ronald M. Finch, Wallace & Tiernan Co., Inc., 416 Flour Exchange, Minneapolis, Minn.

September 24-26.—Watertown, S. D.
LEAGUE OF SOUTH DAKOTA MUNICIPALITIES. Sec., A. E. Mead, University of South Dakota, Vermilion, S. D.

September 25.—New London, Conn.
NEW ENGLAND SEWAGE WORKS ASSOCIATION. (Ocean Beach Pavillion.) Fall meeting. Sec.-Treas., LeRoy W. Van Kleeck, State Dept. of Health, Hartford, Conn.

***September 27-28.—Green Bay, Wisc.**
WISCONSIN CHIEFS OF POLICE ASSOCIATION. Sec., R. K. McCarty, Kaukauna, Wisc.

***September 28-29.—Huron, S. D.**
SOUTH DAKOTA WATER AND SEWAGE WORKS CONFERENCE. (Marvin Hughitt Hotel.) Sec., W. W. Towne, State Board of Health, Pierre, S. D.

September 28-October 2.—Cincinnati, Ohio.
NATIONAL RECREATION ASSOCIATION. (Netherland Plaza Hotel.) Sec., Thomas E. Rivers, 315 Fourth Avenue, New York City.

October 1-3.—St. Paul, Minn.
CIVIL SERVICE ASSEMBLY OF THE UNITED STATES AND CANADA. (St. Paul Hotel.) Thirty-fourth conference on Public Personnel Administration. Dir., James M. Mitchell, 1313 E. 60th St., Chicago, Ill.

October 2-4.—Chicago, Ill.
INSTITUTE OF TRAFFIC ENGINEERS. Sec.-Treas., W. Graham Cole, 60 John St., New York City.

October 4-7.—Atlantic City, N. J.
INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION, INC. (Traymore Hotel.) Sec., Irvin Shulsinger, 8 East 41st St., New York City.

October 5-8.—Cleveland, Ohio.
NATIONAL ASSOCIATION OF PUBLIC SCHOOL BUSINESS OFFICIALS. (Statler Hotel.) Sec., H. W. Cramblet, Board of Education, Pittsburgh, Pa.

October 5-9.—Chicago, Ill.
NATIONAL SAFETY COUNCIL. M'ng. Dir., W. H. Cameron, 20 North Wacker Drive, Chicago, Ill.

***October 7-8.—Augusta, Maine.**
MAINE MUNICIPAL ASSOCIATION. (Augusta City Hall.) Annual convention. Exec. Sec., Philip S. Habermann, 97 Water St., Hallowell, Maine.

October 7-9.—Philadelphia, Pa.
AMERICAN WATER WORKS ASSOCIATION—FOUR STATES SECTION IN CONJUNCTION WITH THE NEW JERSEY SECTION. (Benjamin Franklin Hotel.) Sec., Lloyd Nelson, 1624 Lincoln-Liberty Bldg., Philadelphia, Pa.

October 7-9.—Springfield, Ill.
ILLINOIS MUNICIPAL LEAGUE. (Leland Hotel.) Exec. Dir., A. D. McLarty, 537 So. 4th St., Springfield, Ill.

October 11-13.—Richmond, Va.
LEAGUE OF VIRGINIA MUNICIPALITIES. (John Marshall Hotel.) Exec. Sec., Harold I. Baumes, 902 Travelers Bldg., Richmond, Va.

October 11-13—French Lick, Ind.
INTERNATIONAL CITY MANAGERS' ASSOCIATION. (French Lick Springs Hotel.) Exec. Sec., Clarence E. Ridley, 1313 E. 60th St., Chicago.

***October 12-13.—Beloit, Kansas.**
KANSAS ASSOCIATION OF MUNICIPAL UTILITIES. (Beloit Hotel.) Annual convention. Sec.-Treas., L. C. Angevine, McPherson, Kansas.

October 12-14.—Little Rock, Ark.
AMERICAN WATER WORKS ASSOCIATION—SOUTHWEST SECTION. (Marion Hotel.) Sec., Lewis A. Quigley, 3320 W. Berry St., Fort Worth, Texas.

October 13-13.—Evanston, Ill.
ILLINOIS ASSOCIATION OF PARK DISTRICTS. (Georgian Hotel.) Exec. Dir., A. D. McLarty, 537 S. 4th St., Springfield, Ill.

***October 13-16.—Beatrice, Nebr.**
LEAGUE OF NEBRASKA MUNICIPALITIES. (City Auditorium.) Annual conference. Sec.-Treas., C. E. Beals, 204 Brownell Bldg., Lincoln, Nebr.

October 13-16.—Oshkosh, Wisc.
LEAGUE OF WISCONSIN MUNICIPALITIES. Annual meeting. Sec., Frederick MacMillin, 30 E. Johnson St., Madison, Wisc.

October 18-21.—Cleveland, Ohio.
AMERICAN PUBLIC WORKS ASSOCIATION. (Statler Hotel.) Exec. Dir., Norman Hebden, 1313 E. 60th St., Chicago, Ill.

October 18-21.—Detroit, Mich.
NATIONAL ASSOCIATION OF COMMERCIAL ORGANIZATION SECRETARIES. (Book-Cadillac Hotel.) Wartime conference. Asst. Sec.-Treas., Mrs. Norma McKellops, 1615 H St., N. W., Washington, D. C.

October 19-21.—Paducah, Ky.
AMERICAN WATER WORKS ASSOCIATION—KENTUCKY-TENNESSEE SECTION. (Irving Cobb Hotel.) Sec., H. D. Schmidt, Div. of Sanitary Engineering, State Dept of Health, Nashville, Tenn.

October 19-22.—Cincinnati, Ohio.
NATIONAL TAX ASSOCIATION. (Netherland Plaza Hotel.) Sec., Raymond E. Manning, Library of Congress, Washington, D. C.

October 20-21.—Wausau, Wisc.
AMERICAN WATER WORKS ASSOCIATION—WISCONSIN SECTION. (Wausau Hotel.) Sec., Leon A. Smith, City Hall, Madison, Wisc.

October 21-25.—Chicago, Ill.
THE AMERICAN MUNICIPAL ASSOCIATION. Exec. Dir., Earl D. Mallery, 1313 E. 60th St., Chicago, Ill.

***October 22-25.—Birmingham, Ala.**
ALABAMA LEAGUE OF MUNICIPALITIES. (Tutwiler Hotel.) Exec. Sec., E. E. Reid, Exchange Hotel, Montgomery, Ala.

October 22-24.—St. Louis, Mo.
AMERICAN WATER WORKS ASSOCIATION—MISSOURI VALLEY SECTION. (Coronado Hotel.) Sec., Earle L. Waterman, Room 104, Engineering Hall, University of Iowa, Iowa City, Iowa.

October 22-24.—Cleveland, Ohio.
FEDERATION OF SEWAGE WORKS ASSOCIATION. (Statler Hotel.) Exec. Sec., W. H. Wisely, Box 18, Urbana, Ill.

October 27-30.—St. Louis, Mo.
AMERICAN PUBLIC HEALTH ASSOCIATION. (Jefferson and Statler Hotels.) Exec. Sec., Dr. Reginald M. Atwater, 1790 Broadway, New York City.

October 28-30—Oakland, Calif.
AMERICAN WATER WORKS ASSOCIATION—CALIFORNIA SECTION. (Oakland Hotel.) Sec., H. Arthur Price, Bureau of Water & Power, 316 W. 2nd St., Los Angeles, Calif.

November 2-4.—Durham, N. C.
NORTH CAROLINA SEWAGE WORKS ASSOCIATION. (Washington Duke Hotel.) Sec.-Treas., R. S. Phillips, Chief Chemist Water Dept., 206 Dacian Ave., Durham, N. C.

November 9-10.—Hannibal, Mo.
MISSOURI WATER AND SEWERAGE CONFERENCE. (Mark Twain Hotel.) Sec.-Treas., W. A. Kramer, State Board of Health, Jefferson City, Mo.

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2 Place the Superseal Tube Nut well back on the Type K Tube-Loy with the open thread end facing the end to be flared. The outside diameter of Type K Tube-Loy has been carefully calculated so that the tube-nut will pass freely over it.

3 Hold end of Type K Tube-Loy firmly with clamp. Make sure that the Type K Tube-Loy is gripped in the clamp so that the tubing edge is flush with recessed top surface of clamp.

4 Insert flaring top in the Type K Tube-Loy, with pilot end of the top entirely in the tube. Tap lightly with wooden or rawhide mallet, while holding clamp tight. Flare will be complete when end of Type K Tube-Loy meets the shoulder on the flaring top.

5 To complete the connection, make on the Fitting to the valve, cock or meter, as the case may be, then bring the Tube Nut over the flare to make on to the Fitting.

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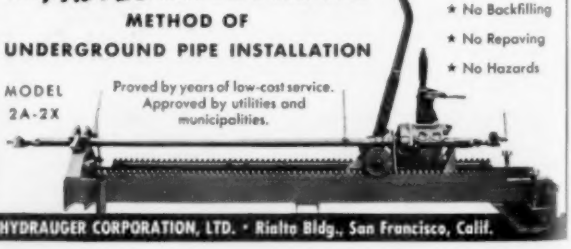

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News and Illustrations

Items of Interest to City, Town and County Officials, and Others Concerned with the Economical Construction and Efficient Operation of Public Improvement Undertakings

Famous Marblehead Cruiser Saved by Sturdy Pumps

Lt. John P. Bracken greeting a group of Worthington workmen on the occasion of the Navy "E" award at the Worthington Harrison Works, June 26, 1942. Lt. Bracken, formerly navigating officer on the now-famous Marblehead Cruiser, told these men that the dependable operation of the pumps they built enabled the crew to save their cruiser damaged in the Battle of the Coral Sea

Story Told at Navy "E" Ceremony

The dramatic story of the cruiser Marblehead, crippled in action against the Japanese in the Java Sea, will be brought home more directly to thousands of municipal plant operators by the information that it was not only the skill and ability of the sailors aboard that vessel, but also the dependability of a Worthington pump similar to pumps that they have in their own plants that enabled this cruiser to return safely to its port halfway across the globe.

In a ceremony on June 26 awarding the coveted Navy "E" Burgee to the Worthington Pump and Machinery Corp., at Harrison, N. J., Lieut. John P. Bracken, formerly assistant navigating officer of the cruiser Marblehead, told employees of this company that their work and toil personified by the pumping equipment they produced kept the Marblehead and 600 men and officers on top of the water.

"The engagement with the Japs lasted for only about three hours," stated Lt. Bracken, "but the return to the United States took three months. Think of that as you build your pumps. Think of that as you gaze upon your Navy "E." Every time you look upon it, think of my ship and other ships of the Navy that are still in there battling because you did your part."

Rear Admiral Henry A. Wiley, U. S. N., Retired, chairman of the Navy Board of Production Award, presented the Navy "E."

LeTourneau Appoints Executive Vice-Pres.

Murray M. Baker of Peoria, Ill., has been appointed to the newly created post of Executive Vice-President of LeTourneau, Inc., Peoria, Ill., according to an announcement by R. G. LeTourneau, President. Mr. Baker undertakes his new duties immediately and will make his headquarters at the Peoria plant.

The new post was created to enable Mr. LeTourneau to devote a greater share of his time to the increased engineering activities made necessary by the war work of the company's four plants in Peoria, Ill.; Tournapull, Ga.; Vicksburg, Miss.; and Stockton, Calif.

The Cover Illustration

The young lady appearing on the front cover is making a symbol of Victory. This also is symbolized by the pile of scrap that will go into the furnaces of the steel companies and eventually wind up making fighting equipment for our armed forces.

This picture, snapped by an alert International Harvester Company photographer, was taken at Creve Coeur, Mo. The young lady is Georgia Lee Seeger.

New Portable Drill Bores Holes into Ground

A new portable earth-boring drill has been developed by Ka-Mo Tools, Inc., 5525 West Ohio St., Chicago, Ill. This drill, it is stated, is easy to operate and quick to assemble. The drill bits are manufactured with a hardened steel cutting head below the screw and are available for boring holes of 3 to 16 inches in diameter.

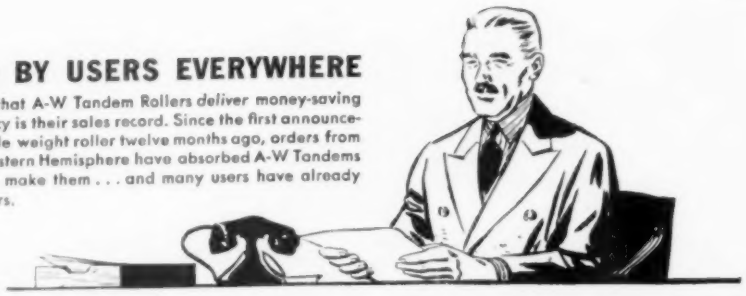
The drills have special cutting heads with adjustable cutting blades which allow them to bore in sand, mud, or clay without grabbing. They are powered by an air compressor. The flight conveyor is especially designed to quickly and easily bring the excavated dirt to the surface.

These drills meet many municipal needs where excavation is necessary without destroying large areas. They also are used in planting and feeding trees.

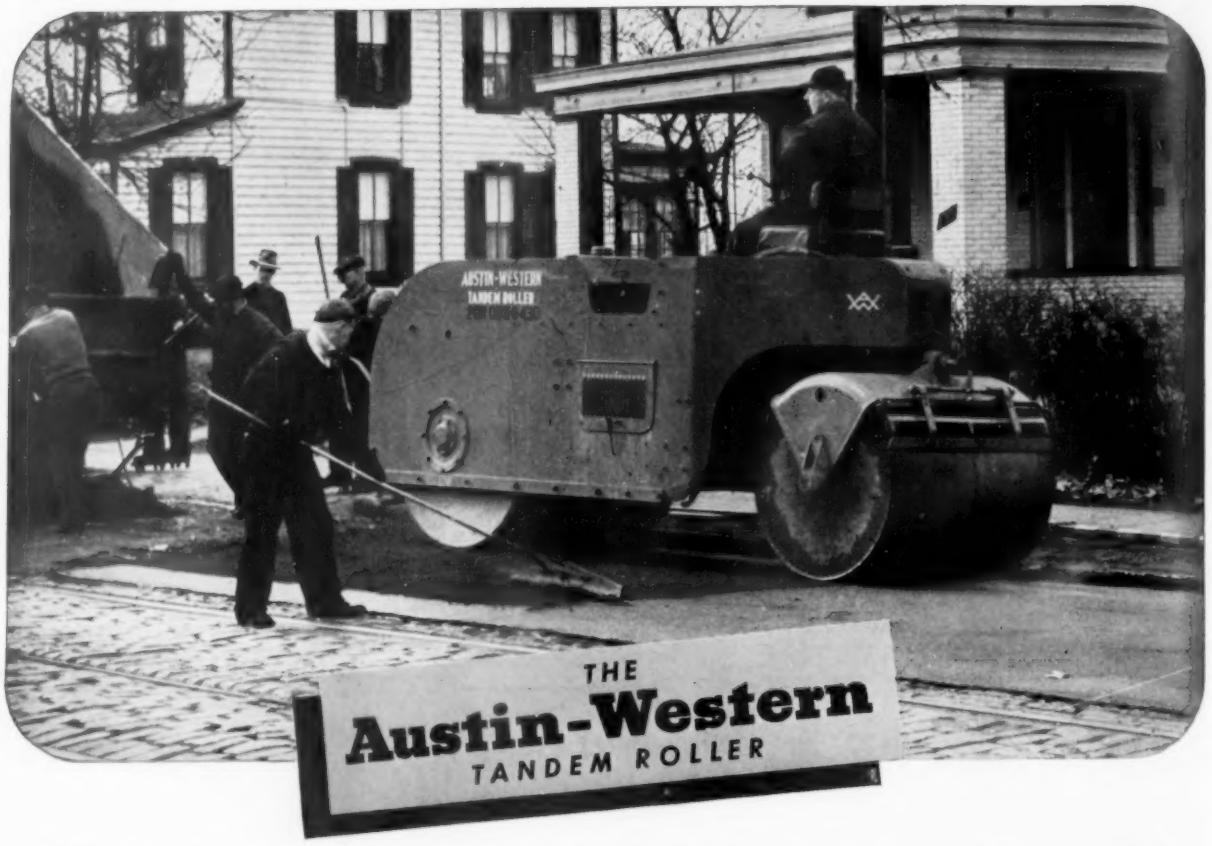
New K-M earth-boring drill

APPROVED BY USERS EVERYWHERE

The best evidence that A-W Tandem Rollers *deliver* money-saving speed and efficiency is their sales record. Since the first announcement of this variable weight roller twelve months ago, orders from all parts of the Western Hemisphere have absorbed A-W Tandems as fast as we could make them . . . and many users have already placed repeat orders.



SHOWS UP BEST at the SHOWDOWN



THE **Austin-Western** TANDEM ROLLER

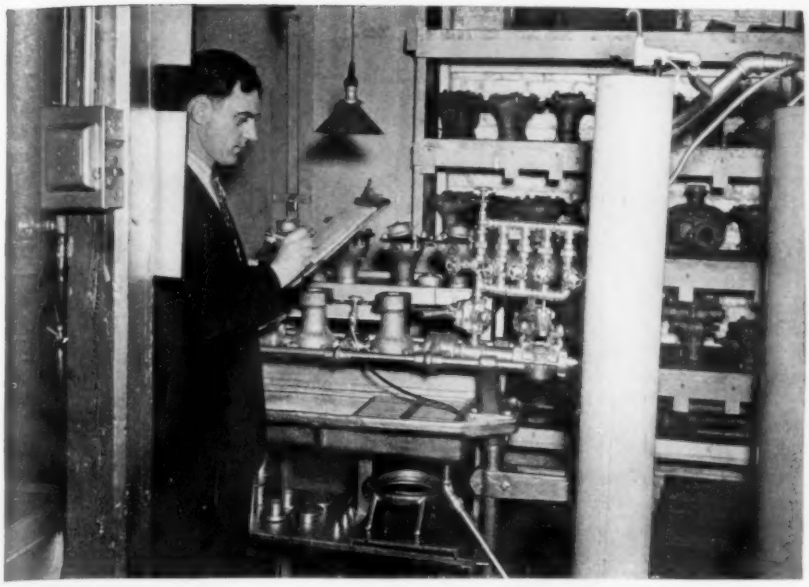
● Here's a roller you can count on for fast, economical performance season after season. Its many refinements in design make this smooth performing A-W Tandem a preferred machine for accurate roller work.

With an A-W Tandem your operator can work closer to curbs because visibility is better, there is less frame over-hang, and more ground clearance under side plates. More convenient controls, with reversing clutch lever mounted on steering column, combine with effortless hydraulic steer to save time and increase efficiency. It changes direction—forward or backward—with that vibrationless smoothness that means a better job and less wear and tear on the machine itself. A lower center of gravity prevents side sway.

A-W variable weight Tandem Rollers are built in 5 to 8 ton and 8 to 10½ ton sizes. Write for complete information on advantages they'll give you on the wide variety of jobs a tandem is called upon to handle.

THE AUSTIN-WESTERN ROAD MACHINERY CO., Aurora, Illinois

MOTOR GRADERS • ELEVATING GRADERS • SCRAPERS • CRUSHING AND SCREENING PLANTS
LOADERS • ROLLERS • ROLL-A-PLANES • MOTOR SWEEPERS • SHOVELS AND CRANES



Keeping adequate tests and records is an essential part of any meter repair program

Water Main Testing and Repairing

Realizing that water-works superintendents and city officials are increasingly interested in methods of water meter testing and repairing because of the urgency for conservation in every way, the Neptune Meter Company, 50 W. 50th St., New York, has published a new booklet outlining proven practices. This booklet entitled "Economics of Water Meter Testing and Repairing" describes a planned program of water meter maintenance at all times. It outlines what practices should be followed and how a well-equipped shop should operate.

Burton L. Boye Dies

Burton L. Boye, President of the Asphalt Institute from 1933 to 1938 and formerly in charge of the asphalt department of the Standard Oil Co. of New York, died at Summit, N. J., on July 9.

Mr. Boye served with Socony for 38 years until his retirement, in 1938. At the time of his death he was filling a war emergency post as Acting Mayor and President of the Common Council of Summit.

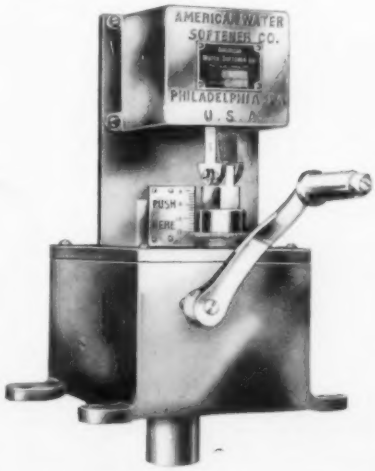
Director of Military Engineers Society

A. W. Herrington, president of the Society of Automotive Engineers, technical advisor to Col. Louis A. Johnson on the recent American Economic Mission to India, and president of The Marmon-Herrington Co. of Indianapolis, Ind., has been elected to serve for three years as a director of the American Society of Military Engineers.

Mr. Herrington is widely known throughout the world as an expert on military transport and is the designer of many military vehicles now in the service of the United Nations on all the major battlefronts of Europe and Asia.

Chemical Feeding for Water-Conditioning

All problems of corrective chemical feeding for water-conditioning are not identical. They present varying conditions that must be met by various types of equipment. The American Water Softener Co., 4th & Lehigh St., Philadelphia, Pa., has analyzed these problems and is offering a new bulletin as a guide as to the proper type of selection of equipment. This bulletin, No. 101-B, describes the various types of equipment that the company manufactures and gives details on the electro-magnetic proportioner that will govern the flow of chemicals in accordance with the flow of water administered to the place of treatment.



Automatic chemical proportioner

Is guarded against:

Damage resulting from possible stoppage of the intake line;

Loss of prime resulting from the accumulation of entrained air or to air inleakage;

Being started unprimed; will immediately shut down automatically if the prime should be destroyed, and

All possibility of dangerous stopping surges or water-hammer reaching the pump casing.

The pump can be started and stopped from a remote control point.

Adjustment of the packing glands is also simplified, as the pump casing and suction line are not primed under pressure.

Ask for Publication P-2536.

DE LAVAL STEAM TURBINE CO. TRENTON, N. J.

PITTSBURGH · DES MOINES

Steel

SWIMMING POOLS

Lower in first cost—finer in appearance and performance—easily maintained! Furnished complete with all desired fittings and accessories—permanently water-tight, frost-proof, good for a lifetime. Write for Bulletin No. 402.

PITTSBURGH · DES MOINES STEEL COMPANY

Pittsburgh, Pa. . . . 3412 Neville Island
Des Moines, Ia. . . . . 913 Tuttle Street

KEEP YOUR STREET FLUSHERS ROLLING!

IT'S PATRIOTIC! IT'S PRACTICAL!

Scarcity of critical materials . . . plus U. S. Army orders for Etnyre "Black Topper" Distributors . . . have practically banned production of Street Flushers (except on high priority ratings) for the duration. It's **patriotic** . . . it's **practical** to take **better care** of your present equipment. Write us for suggestions and repair parts . . . accompany part orders with priority certificates to save time.

ETNYRE

Sanitary STREET FLUSHERS

E.D. ETNYRE & CO. Main Office & Plant OREGON, ILLINOIS

In the Trenches with the Sup'ts.

"It lays as fast as any Pipe I've ever handled"

McWANE 2" CAST IRON PIPE

"My experience with McWane Threaded Joint pipe is that it is easily and rapidly installed. Some days on the H—— job we laid as many as 7,000 feet a day with two small crews of unskilled labor." (Louisiana Supt.)

★ ★

"Have laid more than 25 cars of your THREADED joint pipe in past ten years. You can lay it so much faster and with half the labor —and it's so simple you can use untrained labor." (Tennessee Supt.)

Sand Cast Inside and Outside

McWANE

CAST IRON PIPE COMPANY

BIRMINGHAM, ALA. SIZES 1¼" THROUGH 12"

WANTED: TRAINED ADMINISTRATORS

☆ Cities all over the country are losing some of their top administrators to the federal and state governments and to defense industries. Unless there are trained replacements for these key men, city governments will be seriously crippled. If you are a department head, you owe it to your city to train an "understudy" for your job. If you are a junior administrator, now is the time to prepare for advancement.

Enroll now in one of these ten practical correspondence courses:

- Technique of Municipal Administration
- Municipal Finance Administration
- Municipal Police Administration
- Municipal Recreation Administration
- Local Welfare Administration
- Municipal Personnel Administration
- Municipal Public Works Administration
- Municipal Fire Administration
- Local Planning Administration
- American City and Its Government

☆ Special texts have been prepared for administrators on the job. Lesson papers are reviewed by leading authorities in each field. The $35 fee for each course covers the text, individualized lesson instruction, and a certificate upon satisfactory completion of the work. The text alone sells for $7.50 a copy—$65 for a complete set. For use in group training projects, in lots of five or more, the price is $6 a copy.

There are now more than 700 public officials enrolled in these courses in nearly 300 cities in 42 states.

WRITE FOR A SPECIAL CIRCULAR TODAY

INSTITUTE FOR TRAINING IN MUNICIPAL ADMINISTRATION

1315 EAST 60TH STREET CHICAGO

Power! Portability! Large Dirt Capacity!

TORNADO

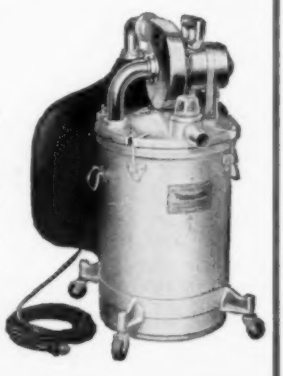
PORTABLE INDUSTRIAL VACUUM CLEANER

POWER—1 h. p. motor. Picks up dust, dirt, chips, etc. Cleans boiler tubes.

PORTABILITY—Weighs only 50 lbs. One man takes it anywhere.

CAPACITY—Large 12-gallon tank for dirt.

ATTACHMENTS—for cleaning everything.



BREUER ELECTRIC Mfg. Co.

5102 N. Ravenswood Ave., Chicago

Write for details and FREE TRIAL Offer

½ Cu. Yd. 8′ Lift

FRONT END SHOVELS for Industrial Tractors

Write for Catalog

Elkhart White Mfg. Co. Indiana

Mr. Alfred C. Sheehy, Deputy State Administrator of War Savings Staff for Mass., presents the Treasury Department's Minute Man flag and certificate to Mr. Irving W. Lane, veteran employee of The Foxboro Co., Foxboro, Mass. The Foxboro Co. has over 95 per cent employee enrollment in Payroll Allotment Plan for war bond purchases

War Bond Honor Flag to Foxboro Co.

The Foxboro Company, of Foxboro, Mass., maker of measuring and controlling instruments for industrial processes, was awarded the Minute Man flag of the Treasury Department, on July 8, in recognition of payroll allotment subscriptions by over 95 per cent of its employees. The flag and accompanying certificate were presented by Alfred C. Sheehy, Deputy State Administrator of the War Savings Staff for Mass., and received by Irving W. Lane, second oldest employee of the company.

Bonner Named Treasurer of Pomona Pump Co.

C. Grannis Bonner, formerly comptroller and more recently treasurer of The Brunswick-Balke-Collender Co. of Chicago, has been elected treasurer of Pomona Pump Co., Pomona, Calif.

C. Grannis Bonner

Bonner relieves Donald C. McKenna, vice-president and former treasurer, who will devote full time to the increasing production activities of the company's four manufacturing plants.

Better Paving Bases Save Money

Engineers and construction men who have been concerned with the building of low-cost roads and streets have long realized the value of adequate bases for both rigid and flexible paving. To assist these men in designing and building this type of road, Solvay Sales Corp., 40 Rector St., New York, has published a new free booklet entitled "Better Bases for Better Surfaces." This booklet gives information on the use of the graded aggregate for stabilized base and the added advantages of using calcium chloride in this stabilizing work.

The booklet points out data from impartial sources showing the reduction in roller time that is required when compacting a base designed with a calcium chloride admixture; it gives cost figures and also points out added advantages such as control of frost action, correction of subgrades weaknesses, and improving of riding surfaces. A standard specification prepared by the American Association of State Highway Officials is included.

Fred W. Hartmann Called to U. S. Army Engineers

Fred W. Hartmann, Assistant District Manager in charge of the Chicago waterworks division for Pittsburgh-National Meters has been given an indefinite leave of absence so that he might serve with the country's armed forces.

On May 7, 1942 has was inducted into the Corps of Engineers, United States Army, with the rank of Captain.

War Repair Manual Issued by Johns-Manville

In response to a number of requests from water-works superintendents who have water systems using Transite pipe, the Johns-Manville Co., 22 E. 40th St., New York, has issued a 92-page bulletin outlining detailed treatment for the restoration of this type of water main in case of bombing raids or other similar emergencies.

The manual is divided into five parts. The first shows actual photographs of bomb damage; the second, typical damage suffered by pipe lines; the third, permanent and temporary repairs to pipe lines; the fourth, installation methods; and the fifth, a group of appendices treating repair parts and tables referred to in the text.

OK CHAMPION SEWER CLEANER

Sewage disposal plants to function well and economically, need clean sewer lines. Old sewer or new yield readily to thorough cleaning when you use OK Champions.

Catch Basins need periodic removal of the thousand and one things that go down into these curb receptacles. Quickly and easily cleaned with OK Champions.

Highway culverts are duck soup for the OK Champion. The bucket takes it out and puts it where you want it in one operation.

For all size sewers, 6 in. to 6 ft. Exclusive patented safety devices and features that absolutely prevent injury to sewer mains or systems.

Complete line of sewer rods and accessories.

Write

CHAMPION CORP.

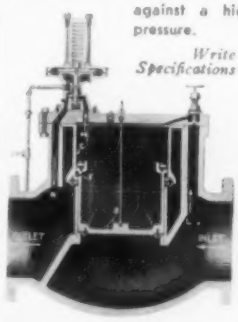
4716 Sheffield Ave. Hammond, Ind.

Single-Acting Semi-Throttling Altitude Valve

Installed in upstream line to tanks, standpipes or reservoirs, this valve sensitively maintains any desired water level to prevent overflow.

The valve is semi-throttling by gradually closing as water approaches the maximum water level to be controlled. The valve is self-contained without any waste of water from above the valve piston, and is especially desirable for service where a low head is to be maintained against a higher influent pressure.

Write for Specifications and Prices.



GOLDEN-ANDERSON VALVE SPECIALTY CO.
Fulton Building Pittsburgh, Pa.

An Opportunity

Our government has given us an opportunity to make the soundest investment in the world, through the purchase of United States War Savings Bonds and Stamps, which will furnish the money to back up the armed forces.

This investment is an obligation as well as an opportunity to actively participate in the Victory program.

Let us all invest for Victory.

U.S. War Savings Bonds and Stamps
are on sale in Post Offices, Stores,
Business and Financial Institutions,
Schools, Theatres, and IBM Offices
throughout the Country

INTERNATIONAL BUSINESS MACHINES CORPORATION

Tanks of Peace

Before a cantonment, navy yard, munitions plant, or flying field can be built, the unromantic bulldozer, sometimes called "the tank of peace," must do the prosaic but essential jobs of ground breaking, leveling and grading. Bulldozers are today playing an important part in America's war effort. Here is a trainload of sixty bulldozers for an undisclosed destination, part of a consignment of 281 units built by the Baker Mfg. Co., Springfield, Ill., for the Bureau of Yards and Docks of the United States Navy

Manufacturers' Group Selects Officers

At the meeting of the Board of Governors of the Water and Sewage Works Manufacturers Association, held June 23 in Chicago, the following officers were elected: Daniel S. McAfee, President; Charles A. McGinnis, Vice-President; Edgar J. Buttenheim, Treasurer; and Arthur T. Clark, Secretary.

Daniel S. McAfee

Mr. McAfee, the new President, has been Vice-President of the Dorr Co. since 1929 and General Sales Manager since 1925. He began his work with this company in 1926 after an extensive career in mining and metallurgical engineering in the West.

Charles A. McGinnis

Mr. McGinnis has been Manager of the Transite Pipe Division of Johns-Manville since 1935. He has been with this organization for the past 14 years. He was previously engaged in civil engineering connected with bridges and heavy building construction. Mr. McGinnis will continue as a member of the Audit-Finance Committee of the Manufacturers Association.

San Francisco Hotel Changes Management

A long-term lease of the Hotel Whitcomb, San Francisco, has been made by Karl C. Weber, it was announced today. Since last year Mr. Weber has been Managing Director of the Hotel. Announcement of the lease is made by J. B. S. Johnson, trustee of the Whitcomb Estate, owners of the property, and formerly president of Hotel Whitcomb, Inc., which is succeeded by Weber under the new arrangement.

Revised Specifications on Asphalt Construction

The Asphalt Institute, 801 Second Ave., New York, has recently revised its construction specifications basing the revisions on laboratory studies and field engineering experiences.

Specification revisions include construction procedure on all types of road work from the high types down to the surface treatments. They include simplified practices relating to the gradation of aggregates and most recently developed equipment essentials.

A. W. W. A. Attendance of Chicago

During an informal luncheon recess of the Board of Directors for the A.W.W.A. held in New York last January each member in attendance made an estimate of the paid registration for the annual A.W.W.A. Conference held last June.

After tabulation of the actual attendance, Harry E. Jordan, Secretary of the A.W.W.A., stated that Clinton Inglee, President and General Manager of The National Water Main Cleaning Co., 30 Church St., New York, was the winner. His guess of 1414 came the closest to the actual number of 1438 in attendance.

BUILDERS
WATER AND SEWAGE PLANT
Instruments

Bulletin 318A, profusely illustrated, in two colors—lists 13 FEATURES of this mechanical flow meter. Sectional views thoroughly explain construction and operation. Eight drawings show correct installation under various operating conditions, and as connected to control chemical feeding in proportion to flow. Write for a copy. Address:

BUILDERS-PROVIDENCE, INC.
Division of Builders Iron Foundry
9 Codding Street Providence, R. I.

INSTALLATIONS WORLD WIDE
LARGEST CITY TO SMALLEST VILLAGE

VALVES COMPLETE EQUIPMENT FOR WATER WORKS FILTRATION AND SEWAGE DISPOSAL PLANTS
LATEST "COREY TYPE" HYDRANTS

Write for Catalogue and Information
IOWA VALVE CO.
General Offices:
Hubbell Bldg., Des Moines, Iowa
Plant:
Oskaloosa, Iowa

"These days we appreciate Burroughs mechanical service more than ever"

"Our experience with Burroughs mechanical service has long since proved that it is without equal."

Burroughs Provides These Advantages

1. Burroughs mechanical service is rendered by factory-trained, factory-controlled, salaried representatives whose work is guaranteed by Burroughs.
2. Every Burroughs service point has genuine Burroughs parts to meet service needs.
3. Burroughs service is national, conveniently located to give prompt attention to every call.
4. All Burroughs service men are promptly and fully informed about every improvement in service, every new feature and every mechanical change.

Today, when wartime conditions make it essential that users take exceptionally good care of their figuring and accounting equipment, Burroughs mechanical service is even more deeply appreciated. For—as always—it is rendered by Burroughs' own salaried, factory-trained, factory-controlled men, whose sole interest is to help Burroughs owners get the maximum of continuous, profitable use out of their Burroughs machines.

Efficient Burroughs service is available to the user under either of two plans: (1) a Burroughs Service Agreement at a predetermined, moderate annual cost; or (2) service when requested, at a moderate charge for each service as rendered. Call your local Burroughs office, or write—

BURROUGHS ADDING MACHINE CO., DETROIT, MICH.

Burroughs

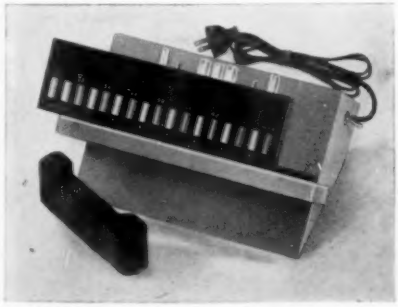
Buy War Bonds and Stamps. Help win the war for FREEDOM.

These hydraulically operated roller attachments make this Austin-Western road grader able to meet practically any street-maintenance problem from the grading and scarifying to the final rolling

Roller Attachment for Power Grader

In an effort to design an all-purpose machine for street-maintenance work, the Austin-Western Road Machinery Co., Aurora, Ill., has manufactured a roller attachment to be installed with the company's 99-M power grader. This unit, described in a leaflet AD-1955 furnished by this company, is able to maintain streets by scarifying, grading, and compacting the resulting street surface with the rollers.

The rollers are of hollow welded steel construction with dished ends for greater strength. They are mounted on a rigid, ship-channel supporting frame which pivots from the rear bumper. A simple, easy-working hand lever on the dash controls the raising and lowering of the rolls by hydraulic power.



The new Dalite midget lamp

New Midget Lamp for Testing Purposes

A new small lamp has just been placed on the market by W. A. Taylor & Company, 7300 York Rd., Baltimore, Md., makers of pH and other control equipment. This instrument known as the Taylor Midget Dalite Lamp has been designed for making color determinations with Taylor comparators at night or in dark places. Also, it is reported to be extremely useful for all routine testing even in daylight, since it furnishes a consistent and uniform background, thus eliminating interference from trees, walls, and similar objects.

The base of the instrument sits on a shelf at an angle of 45 degrees. In making readings the operator can look directly into the slots in the slide and base. This eliminates handling the outfit with possible chance of breakage. It can be used with any Taylor pH Chlorine or Phosphate Comparator.

Treatment Tables Simplify Water Main Sterilization

To assist water-works and public health officers in the emergency sterilization of mains that have been put out of service by bombings or other mishaps, Proportioneers, Inc., 99 Codding St., Providence, R. I., has prepared tables covering chlorine doses and directions for procedure.

For the sake of simplicity of operation, chlorine tables are based on constant rate of application of chemical solutions at 90 gallons per day, 3.75 gallons per hour, or one gallon in 16 minutes. The use of a standard rate of application simplifies the initial setup for the equipment as well as its attendance while in use. It also lessens the time required to start operation as the feeder can be adjusted for this water at the water-works storehouse.

SPARLING
Water Measuring Equipment
SINCE 1919—
Sparling Main-Line Meters have given Service and Satisfaction in Municipal and Industrial waterworks —and now, of course, in those serving our Armed Forces.
If you haven't a copy of Bulletin No. 308, we will gladly send one upon request.

R. W. SPARLING
Box 3277 Terminal Annex.....LOS ANGELES
3104 S. Michigan Avenue.....CHICAGO
622 Broadway.....CINCINNATI
101 Park Avenue.....NEW YORK

BEAT THE BOMBERS!

Save LIVES with FEDERAL AIR RAID SIRENS

Tested and Proved in Europe!

Every city—every manufacturing plant should install efficient air raid warning sirens at once!

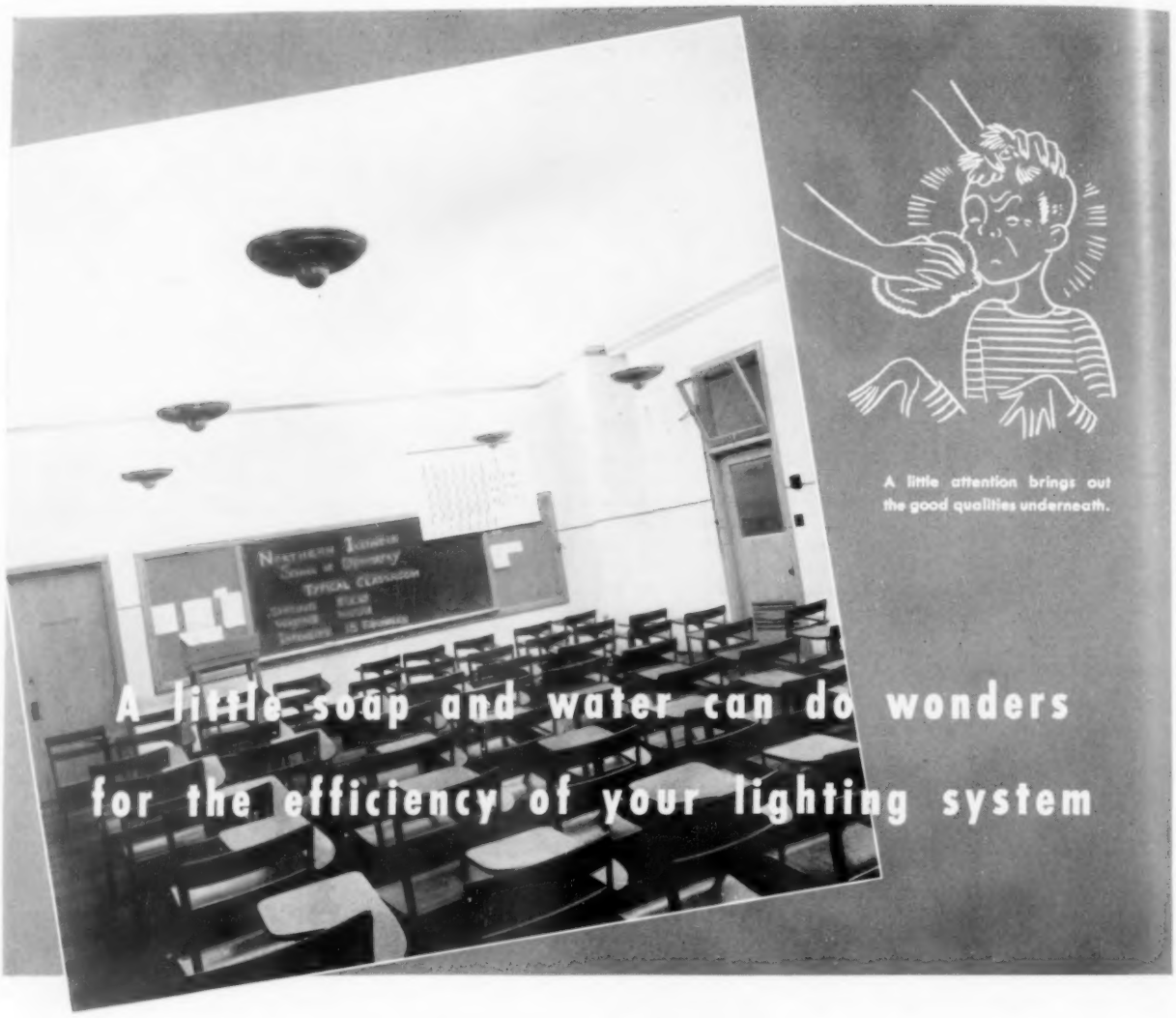
Federal Electric Company—the largest Siren manufacturer in the world is ready to help you!

Federal Air Raid Sirens have been proved under actual bombing conditions in Europe since 1938!

Write on official stationery, or wire for special air raid protection data telling how to plan, install and operate air raid warning sirens!

For earliest possible delivery ACT NOW!

FEDERAL ELECTRIC CO., INC.
"Siren Headquarters"
8744 South State Street, Chicago, Illinois


A little attention brings out the good qualities underneath.
A little soap and water can do wonders
for the efficiency of your lighting system

The grime that gathers on light reflectors can play havoc with the efficiency of your lighting system. But, if Alzak* Aluminum Reflectors are on the job, it's no trick to restore their original high reflectivity.

An occasional dusting with a dry cloth may be all that Alzak Reflectors require for maintenance. Or, if they're working out-of-doors or where fumes are in the air, they may need washing with a mild soap and water. They may even need a different treatment where conditions are severe.

The Alumilite finish (process patented) gives the reflector a hard and tarnish-resistant surface. That's why the original high efficiency of your lighting system is easy to maintain when you're using Alzak Aluminum Reflectors.

If you want help on this subject, send for the booklet, "Instructions for the Protection and Maintenance of Alumilite Finishes and Alzak Reflectors." Write ALUMINUM COMPANY OF AMERICA, 1945 Gulf Building, Pittsburgh, Pa.

*Registered Trademark

ALCOA ALUMINUM

Mention THE AMERICAN CITY—it helps.

Wrought Iron in Sewage Works

Recognizing that sewage is inherently corrosive and accordingly severe in its action upon metals and similar materials with which it comes in contact, the A. M. Byers Co., 6th and Bingham Sts., Pittsburgh, Pa., have issued a special technical bulletin entitled "Wrought Iron for Sewage Treatment and Disposal Installations" that is intended to give engineers and sewage-works operators practical information for combating this problem.

The booklet points out that sludge in decomposing gives off carbon dioxide and hydrogen sulfide in sufficient quantities to create corrosive problems. Chemicals added to the sewage or the sludge often aggravate these corrosive conditions. These factors make it necessary to design the plant with equipment so constructed that it can withstand this action.

The bulletin points out how wrought iron is able to furnish relatively maintenance-free service. It also outlines the advantages in protective coatings to all exposed metals whether they are wrought iron or not. It illustrates its points by showing actual wrought-iron installations in sewage-treatment plants throughout the country.

Founder of Rensselaer Valve

Ellis L. Rowe, Chairman of the Board of Directors of the Rensselaer Valve Co., Troy, N. Y., died on July 9th at his home in Pasadena, Calif., at the age of 83.

Mr. Rowe was the founder of Rensselaer Valve Co. and was actively interested in its operation until 1941. At that time he resigned as president and treasurer of the company but continued as Chairman of the Board.

Accounting System Simplifies Tax Problems

An entire change in the accounting system at Lewiston, Maine, built around fully automatic Sunstrand tax and budgetary accounting equipment manufactured by Underwood Elliott Fisher, One Park Ave., New York, has resulted in substantial savings, better controls, more prompt and frequent financial reports, and a more detailed account for the municipal council.

This change was based on seven months of careful study of mechanical accounting equipment and forms used in other cities. These studies were made by Julian W. Deshaies, city auditor and were unanimously approved by the Board of Finance. It centralized purchasing procedures, budgetary control devices, and provided for prompt, periodical budget reports. Procedures in the Treasurer-Collector's office have been improved with the use of the modern machines. It has brought about substantial savings, better controls, and more accurate detailed information.

"The improvement in efficiency and the savings in time have been gratifying," states Mr. Deshaies. "Previously we prepared monthly budget reports that took us from two to three days to make. Now we can do the same work in 20 minutes. Formerly our tax-billing job took seven or eight weeks. Now we have it completed in ten days."

Executive Vice-President for Diamond Alkali

At a meeting of the Board of Directors of the Diamond Alkali Co., Koppers Bldg., Pittsburgh, Pa., held May 4, 1942, Mr. George S. Cooper was elected Executive Vice-President of the company.

George S. Cooper

Mr. Cooper has been connected with the sales of Diamond products either in the sales department or with one of its associates since 1919. For the past five years he has been Vice-President in charge of sales with his office in Pittsburgh, where he will continue in his new position.

Insurance Guidance for Municipalities

To become aware of all the risks and the ones that are protected is an obligation of every municipal government. How to supply this protection economically is a problem that has for many years puzzled city officials.

The Home Fleet of Insurance Companies, 59 Maiden Lane, New York, have developed a service suited particularly to the needs of the city government. This company is in a position to furnish audit facilities, field inspection, and scientific planning that will lead to the economic selection of the type of insurance best suited to your municipality. This will give an intelligent answer to the amount of insurance, the form, kind, and the rates and premiums necessary to cover this protection.

New Victory Packing as Substitute for Jute

Since the war has cut off this nation's normal supply of jute, the Hydraulic Development Corp., 50 Church St., New York, has developed a substitute packing. This new Victory Packing called "Fibrex" has a water-repellant core and a strong woven paper covering which packs in a joint in exactly the same manner as braided jute, and will not breed bacteria. It is 70 per cent lighter in weight than an equivalent amount of jute. It is made in sizes ranging from $\frac{3}{8}$" to $\frac{5}{8}$".

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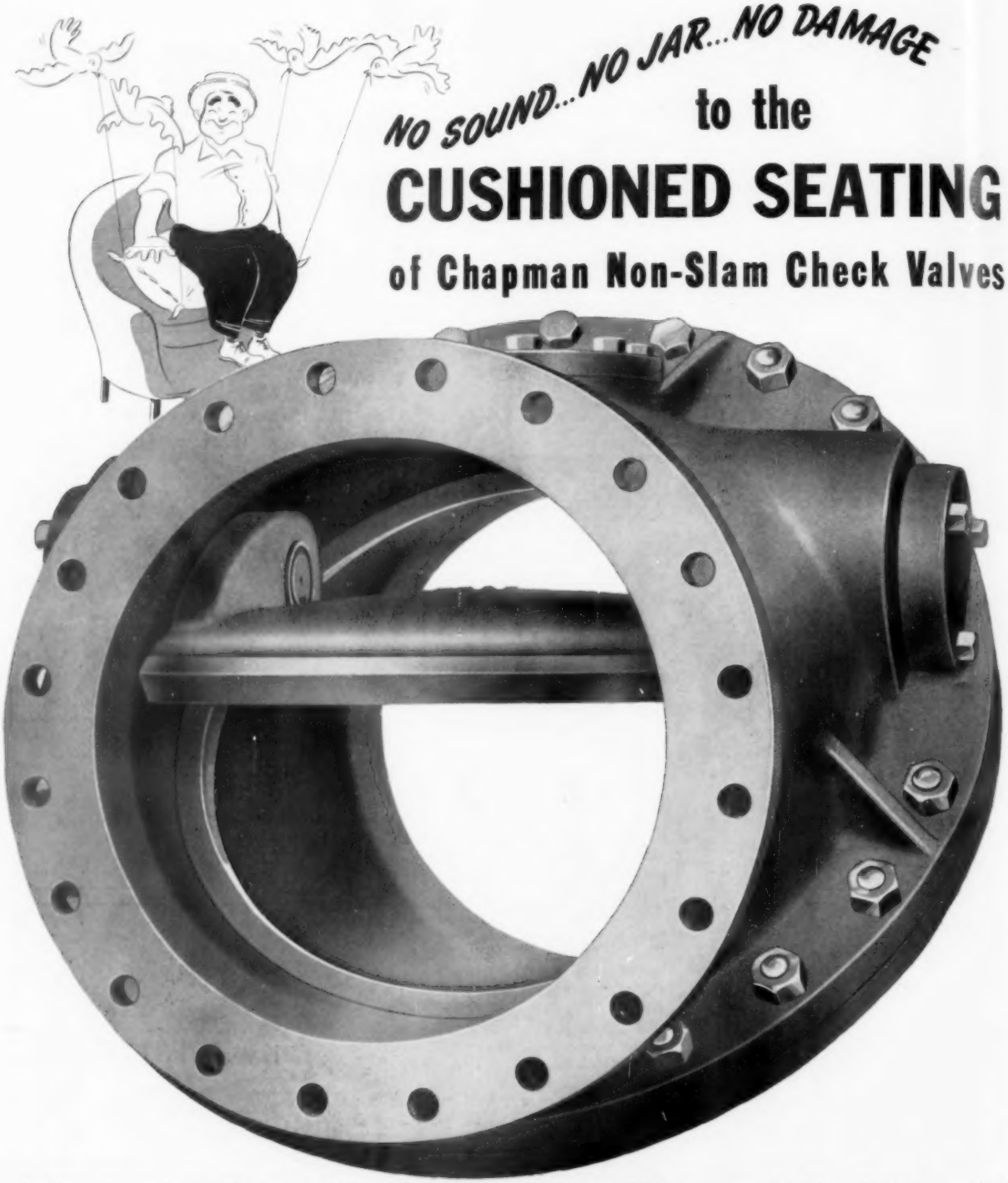

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New President for Worthington-Gamon

Harry C. Beaver has been elected president of the Worthington-Gamon Meter Co., 296 South St., Newark, N. J. He succeeds the late E. T. Fishwick, according to an announcement made on June 10. Mr. Beaver is also president of Worthington Pump & Machinery Corp.

Harry C. Beaver

R. R. Anderson, treasurer and manager of the Worthington-Gamon Meter Co., has been made vice-president and director and will retain his office as treasurer. Mr. Anderson, who is a well-known figure at the water-works conventions, and who has a host of friends throughout the water-supply field, has been with the Worthington-Gamon Meter Co. since 1920.

R. R. Anderson

Principles of Taste and Odor Control

Taste and odor in water purification may be controlled by the use of activated carbon, by chlorine-ammonia treatment, by super chlorination, the use of ozone, and the application of potassium permanganate.

All these methods are discussed thoroughly in the new free booklet issued by the Industrial Chemical Sales Div. of the West Virginia Pulp and Paper Co., 230 Park Ave., New York. This book also gives an interesting history of ancient and modern water supplies.

In discussing taste and odor control, it is pointed out that much of this comes from either industrial pollution in water supplies or pollution from natural sources, particularly algae.

Regarding industrial pollution, it is pointed out that manufacturers have done much to reduce their wastes, and considerable effort is still being expended along that line. However, it is pointed out that the water-treatment plant can most economically handle the last fractions of this load and should be prepared to do so.

Algae control may be handled in one of the three following methods:

1. The application of a chemical toxic to algae but not toxic to humans in the concentration required
2. The removal of essential food materials
3. The exclusion of light

Each of these methods is enlarged on in the text.

In discussing the history of water purification, the booklet states that when filtration was first adopted in England as a practice, previous to 1825, water was pumped directly from the Thames to the consumer. However, James Simpson, an engineer of that period, conducted some research and decided to construct a one-acre filter bed for the Chelsea Water Company. The results were described as follows:

"As this operation effectually separates from the water all those substances which occasion its turbid appearance when first drawn from the river, its transparency and taste at the works are equal to that of the finest springs."

Water Purification in Battle Dress

Water purification by the use of ozone, like many other peacetime civilian pursuits, has gone to war. The Technicraft Engineering Co., 5610 South Soto St., Los Angeles, Calif., has developed a new portable unit known as Sterozone Model B, light enough to be dropped by parachute in remote areas.

This unit sterilizes the water, killing all bacteria, controls taste and odor, and reduces color. Advantages claimed by the manufacturer are complete water purification without the use of chlorine or other chemicals now on the restricted list, automatic operation that does not require supervision by highly trained technicians, and extremely low-cost operation.

While this unit is designed primarily for military use, it also may develop into an economical and reliable small purification plant in cities where an auxiliary water supply is needed in parks, airports, playgrounds, or other places that are difficult to serve by the normal city water supply.

This Sterozone Model B water-purification unit is capable of handling up to 1,200 gallons per hour without the use of chlorine or other chemicals. It is light enough to be dropped by parachute in remote areas

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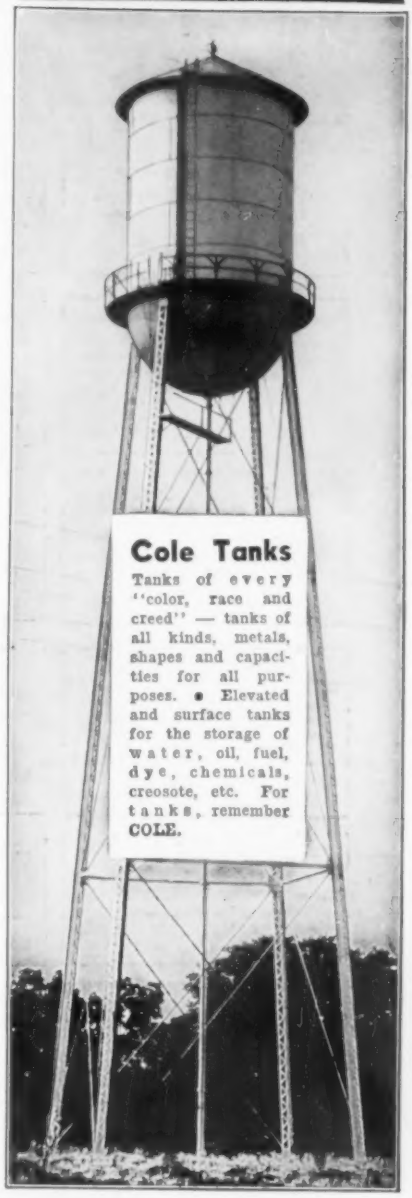
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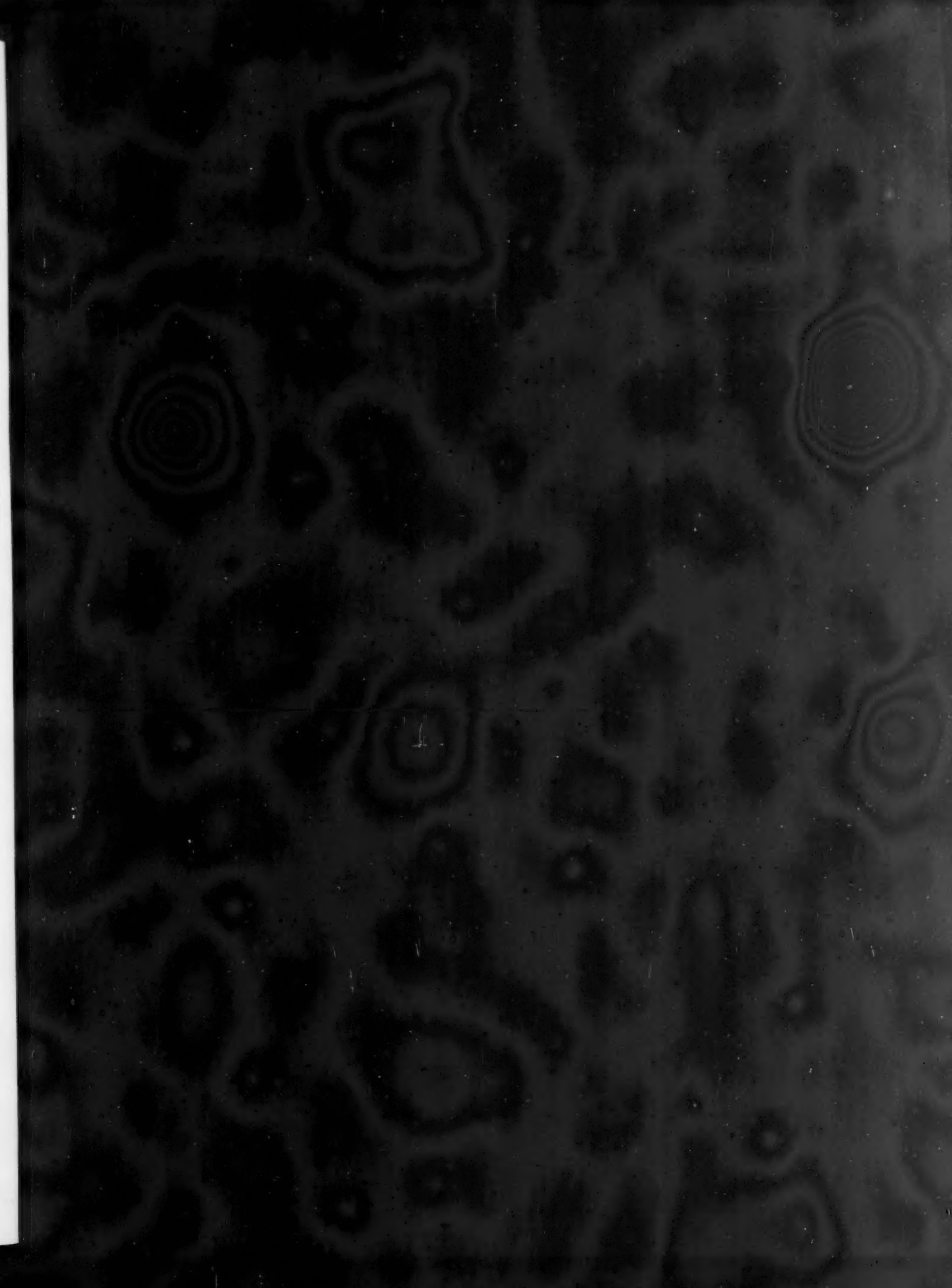

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Traffic control for safety and facilitation; fewer grade crossings

Plenty of parks, parkways, playgrounds, and swimming pools

Administrative efficiency and citizenship co-operation in bringing these things to pass

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